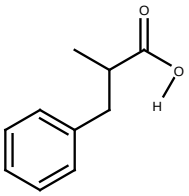
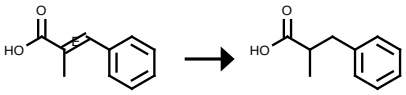
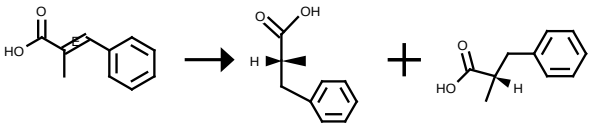
Query

	Query	Results	Date
1. Query	 Search as: Product, As drawn, Ignore stereo, No salts, No mixtures, No isotopes, No charges, No radicals, No additional rings	188 reactions	2010-06-19 16h:53m:33s (EST)



Rx-ID: 305307 View in Reaxys

Yield	Conditions & References
99 %	**With** hydrogen, KOH, Pd/polystyrene-poly(ethylene glycol) **in** H_2O, Time= 24h, T= 25 °C , p= 760Torr **Nakao, Ryu; Rhee, Hakjune; Uozumi, Yasuhiro**; Organic Letters; **vol.** 7; nb. 1; (2005); p. 163 - 165 View in Reaxys
	With H_2, <Rh(cycloocten)2Cl>2, amidine-Li-der. **in** tetrahydrofuran, Time= 17h, p= 825.07Torr , Ambient temperature, cat. asymmetric hydrogenation; various times, solvents and mol-ratios of the catalysts; Li-derivative of C_6H_5C<=N-(S)-$CH(CH_3)(C_6H_5)$>$NHCH(CH_3)(C_6H_5)$ as cocatalyst, Product distribution **Brunner, Henri; Agrifoglio, Giuseppe**; Monatshefte fuer Chemie; **vol.** 111; (1980); p. 275 - 287 View in Reaxys
	With Raney nickel, T= 150 °C , p= 73550.8Torr , Hydrogenation **Mastagli; Lambert**; Comptes Rendus Hebdomadaires des Seances de l'Academie des Sciences; **vol.** 233; (1951); p. 751 View in Reaxys
	With nickel-aluminium-alloy, aqueous NaOH **Schrecker**; Journal of Organic Chemistry; **vol.** 22; (1957); p. 33 View in Reaxys
	With acetic acid, platinum, Hydrogenation **Woodruff; Conger**; Journal of the American Chemical Society; **vol.** 60; (1938); p. 465 View in Reaxys
	With H_2, Pd/C **Somasekharan, K. N.; Kiefer, Edgar F.**; Indian Journal of Chemistry, Section B: Organic Chemistry Including Medicinal Chemistry; **vol.** 27; nb. 1-12; (1988); p. 29 - 37 View in Reaxys **Yu, Hongtao; Simon, Helmut**; Tetrahedron; **vol.** 47; nb. 43; (1991); p. 9035 - 9052 View in Reaxys
99 % Chromat.	**With** ammonium formate, [bmim][BF_4], Pd(OAc)2, Time= 5h, T= 65 °C **Baan, Zoltan; Finta, Zoltan; Keglevich, Gyoergy; Hermecz, Istvan**; Tetrahedron Letters; **vol.** 46; nb. 37; (2005); p. 6203 - 6204 View in Reaxys
97 % Spectr.	**With** H_2, polysilane-supported Pd **in** hexane, Time= 6h, T= 20 °C **Oyamada, Hidekazu; Akiyama, Ryo; Hagio, Hiroyuki; Naito, Takeshi; Kobayashi, Shu**; Chemical Communications (Cambridge, United Kingdom); nb. 41; (2006); p. 4297 - 4299 View in Reaxys
99 % Chromat.	**With** HCO_2NH_4, [bmim][BF_4], palladium/magnesium-lanthanum mixed oxide, Time= 5h, T= 80 °C **Baan, Zoltan; Potor, Attila; Cwik, Agnieszka; Hell, Zoltan; Keglevich, Gyoergy; Finta, Zoltan; Hermecz, Istvan**; Synthetic Communications; **vol.** 38; nb. 10; (2008); p. 1601 - 1609 View in Reaxys



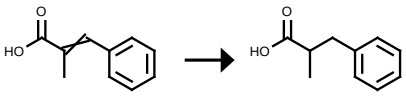
Rx-ID: 2062919 View in Reaxys

Yield	Conditions & References
	With H_2,, <Rh_2(COD)2><BF_4>2, Et_3N **in** tetrahydrofuran, Time= 1h, p= 760Torr , Ambient temperature, different chiral catalysts, Product distribution **Johnson, Thomas H.; Rangarajan, G.**; Journal of Organic Chemistry; **vol.** 45; nb. 1; (1980); p. 62 - 65 View in Reaxys
	With H_2, <RhCl(nbd)>2, chiral phosphinediamine **in** methanol, Time= 57h, T= 25 °C , p= 15001.2Torr , various solvents, pressures, times; other chiral phosphine diamine ligand, Product distribution **Yamada, Issaku; Ohkouchi, Munetaka; Yamaguchi, Motowo; Yamagishi, Takamichi**; Journal of the Chemical Society, Perkin Transactions 1: Organic and Bio-Organic Chemistry (1972-1999); nb. 12; (1997); p. 1869 - 1874 View in Reaxys
	With H_2, <RhCl(nbd)>2-(S,S)-isopropylbis<2-(1-N,N-dimethylamioethyl)phenyl>phosphine **in** methanol, Time= 86h, T= 25 °C , p= 30400Torr , Title compound not separated from byproducts **Yamada, Issaku; Yamaguchi, Motowo; Yamagishi, Takamichi**; Tetrahedron: Asymmetry; **vol.** 7; nb. 12; (1996); p. 3339 - 3342 View in Reaxys
	With H_2, <RhCl(bicyclo<2.2.1>hepta-2,5-diene)>2, (S,S)-isopropylbis<2-(1-N,N-dimethylaminoethyl)phenyl>phosphine **in** methanol, Time= 86h, T= 25 °C , p= 30002.4Torr , Yield given. Yields of byproduct given. Title compound not separated from byproducts **Yamada, Issaku; Ohkouchi, Munetaka; Yamaguchi, Motowo; Yamagishi, Takamichi**; Journal of the Chemical Society, Perkin Transactions 1: Organic and Bio-Organic Chemistry (1972-1999); nb. 12; (1997); p. 1869 - 1874 View in Reaxys
	With H_2, $Ru(OCOCH_3)2$<(S)-2,2'-bis(diphenylphosphino)-5,5',6,6',7,7',8,8'-octahydro-1,1'-binaphthyl> **in** methanol, Time= 48h, p= 1140Torr , Ambient temperature, Yield given. Yields of byproduct given. Title compound not separated from byproducts **Uemura, Toshitsugi; Zhang, Xiaoyoung; Matsumura, Kazuhiko; Sayo, Noboru; Kumobayashi, Hidenori; et al.**; Journal of Organic Chemistry; **vol.** 61; nb. 16; (1996); p. 5510 - 5516 View in Reaxys
	With H_2, [$Ru(\eta^2\text{-}O_2CCH_3)2$((S)-$H_8$-binap)] **in** methanol, Time= 48h, T= 25 °C , p= 1125.09Torr , Title compound not separated from byproducts **Maienza, Francesca; Santoro, Francesco; Spindler, Felix; Malan, Christophe; Mezzetti, Antonio**; Tetrahedron: Asymmetry; **vol.** 13; nb. 16; (2002); p. 1817 - 1824 View in Reaxys
	With hydrogen, (R)-(S)-NMe_2-P(3,5-Me-4-MeOPh)2-Mandyphos, [Rh(nbd)2]BF_4 **in** methanol, Time= 94h, T= 25 °C , p= 37503Torr , Title compound not separated from byproducts **Spindler, Felix; Malan, Christophe; Lotz, Matthias; Kesselgruber, Martin; Pittelkow, Ulrich; Rivas-Nass, Andreas; Briel, Oliver; Blaser, Hans-Ulrich**; Tetrahedron: Asymmetry; **vol.** 15; nb. 14; (2004); p. 2299 - 2306 View in Reaxys
	With H_2, (R)-1,1'-di[(3,4,5-$Me_3C_6H_2$)2P]-9,9'-spirobifluorene*Ru(OAc)2 **in** methanol, Time= 18h, T= 25 - 28 °C , p= 4560Torr , Title compound not separated from byproducts **Cheng, Xu; Zhang, Qi; Xie, Jian-Hua; Wang, Li-Xin; Zhou, Qi-Lin**; Angewandte Chemie, International Edition; **vol.** 44; nb. 7; (2005); p. 1118 - 1121; Angewandte Chemie; **vol.** 117; nb. 7; (2005); p. 1142 - 1145 View in Reaxys

	With H_2, [Rh(cod)2]BF_4, phosphoramidite based on chiral-3,3'-dimethylbinol, PPh_3 **in** propan-2-ol, H_2O, Time= 16h, T= 30 °C , p= 18751.5Torr , Title compound not separated from byproducts **Hoen, Rob; Boogers, Jeroen A. F.; Bernsmann, Heiko; Minnaard, Adriaan J.; Meetsma, Auke; Tiemersma-Wegman, Theodora D.; Vries, Andre H. M. de; Vries, Johannes G. de; Feringa, Ben L.**; Angewandte Chemie, International Edition; **vol.** 44; nb. 27; (2005); p. 4209 - 4212; Angewandte Chemie; **vol.** 117; nb. 27; (2005); p. 4281 - 4284 View in Reaxys
	With H_2, (R)-spirofluorene-[(3,4,5-Me_3-C_6H_2)2P]2-[Ru(OAc)2] complex **in** methanol, Time= 18h, T= 25 - 28 °C , p= 4560Torr , Title compound not separated from byproducts **Cheng, Xu; Xie, Jian-Hua; Li, Sheng; Zhou, Qi-Lin**; Advanced Synthesis and Catalysis; **vol.** 348; nb. 10-11; (2006); p. 1271 - 1276 View in Reaxys
	With H_2, pyridylphosphorus ligand, zinc(II) salphen, [Rh(nbd)2(BF_4)] **in** CH_2Cl_2, Time= 16h, T= 35 °C , p= 3750.3Torr , Product distribution, Further Variations: Reagents **Kuil, Mark; Goudriaan, P. Elsbeth; Kleij, Arjan W.; Tooke, Duncan M.; Spek, Anthony L.; Leeuwen, Piet W. N. M. van; Reek, Joost N. H.**; Dalton Transactions; nb. 22; (2007); p. 2311 - 2320 View in Reaxys
	With [Rh(COD)(S,S)-bis(1-naphthyl(phenyl)phosphino)ethane)]BF_4, H_2, Et_3N **in** methanol, Time= 65h, T= 25 °C , p= 4500.45Torr , Product distribution, Further Variations: Reagents **Maienza, Francesca; Spindler, Felix; Thommen, Marc; Pugin, Benoit; Malan, Christophe; Mezzetti, Antonio**; Journal of Organic Chemistry; **vol.** 67; nb. 15; (2002); p. 5239 - 5249 View in Reaxys
	With H_2, Rh/[1-[(1-Ph_2P)Et]-2-(2-(3,5-(CF_3)2-Ph)2-P-Ph)-ferrocene] **in** methanol, Time= 20h, T= 25 °C , p= 3750.38Torr , Product distribution, Further Variations: Catalysts **Sturm, Thomas; Weissensteiner, Walter; Spindler, Felix**; Advanced Synthesis and Catalysis; **vol.** 345; nb. 1-2; (2003); p. 160 - 164 View in Reaxys
	With H_2, 2,6,2',6'-(MeO)4-4,4'-[(3,5-Me_2-C_6H_3)2-P]2-[3,3']bipyridinyl, [Ru(benzene)Cl]Cl **in** methanol, Time= 24h, T= 60 °C , p= 4500.45Torr , Title compound not separated from byproducts. **Qiu, Liqin; Li, Yue-Ming; Kwong, Fuk Yee; Yu, Wing-Yiu; Fan, Qing-Hua; Chan, Albert S. C.**; Advanced Synthesis and Catalysis; **vol.** 349; nb. 4-5; (2007); p. 517 - 520 View in Reaxys
	Example Name C.12 The catalyst precursor and the ligand were stirred in the solvent under argon. A solution of the substrate was added, the argon is drawn off with vacuum and the vessel is connected to a hydrogen supply at the given pressure and temperature. Switching on the stirrer starts the hydrogenation. After the given time, the stirrer is switched off and the solution is placed under argon again. Conversion and enantiomeric excess (ee) are determined by gas chromatography. **With** hydrogen, di(norbornadiene)rhodium(I) tetrafluoroborate, $C_{40}H_{58}FeN_2O_3P_2$ **in** methanol, Time= 40h, T= 25 °C , p= 3750.38Torr , Product distribution / selectivity **Patent**; **Solvias AG**; WO2007/135179; (2007); (A1) English View in Reaxys
	With 5percent-palladium/activated carbon, hydrogen, (L)-(-)-cinchonidine, benzylamine **in** 1,4-dioxane, water, T= 23 °C , p= 760.051Torr , optical yield given as percent ee, enantioselective reaction **Sugimura, Takashi; Uchida, Takayuki; Watanabe, Junya; Misaki, Tomonori; Okuyama, Tadashi; Kubota, Takeshi; Okamoto, Yasuaki**; Journal of Catalysis; **vol.** 262; nb. 1; (2009); p. 57 - 64 View in Reaxys
	With di(norbornadiene)rhodium(I) tetrafluoroborate, hydrogen **in** tetrahydrofuran, Time= 24h, T= 20 °C , p= 7500.75Torr , optical yield given as percent ee, enantioselective reaction

	Lee, Jong-Dae; Thanh, Thien Co; Kim, Tae-Jeong; Sang, Ook Kang; Synlett; nb. 5; (2009); p. 771 - 774 View in Reaxys
	Example Name D.3 0.41 g (2.53 mmol) of 2-methylcinnamic acid and 5 ml of degassed methanol are introduced in succession into a Schlenk vessel filled with argon. A catalyst solution consisting of 4.73 mg (0.01265 mmol) of [Rh(norbornadiene)2]BF4, 8.77 mg (0.0133 mmol) of ligand A and 5 ml of degassed methanol is prepared in a second Schlenk vessel filled with argon. This solution and the catalyst solution are then transferred in succession by means of a steel capillary into a 50 ml autoclave filled with argon. The ratio of substrate/catalyst is 200. The autoclave is closed and a pressure of 5 bar is set by means of 4 flushing cycles (pressurization to 10 bar of hydrogen). The autoclave is thermostated at 25.deg.C and the reaction is started by switching on the stirrer. The reactor is stirred for 19 hours. After opening the autoclave, a reddish reaction solution is isolated. The conversion is quantitative (determined by means of GC and (at)H-NMR). Removal of the solvent on a rotary evaporator gives a quantitative yield of 2-methyl-3-phenylpropionic acid having an enantiomeric purity of 29percent ee (determined by means of HPLC after conversion into the methyl ester; column: Chiracel OB.). **With** hydrogen, di(norbornadiene)rhodium(I) tetrafluoroborate, (S)Fc-α-S(C_5H_5)Fe(C_5H_3(PPh_2)CH(OH)C_6H_4(PPh_2)) **in** methanol, Time= 19h, T= 25 °C , p= 3750.38Torr , Product distribution / selectivity **Patent**; **UMICORE AG and CO. KG**; WO2005/108409; (2005); (A2) English View in Reaxys
	A method similar to that of Example D3 is employed. 8.96 mg (0.0133 mmol) of methoxy- TANIAPHOS are used in place of the ligand A. The conversion is 100percent. Removal of the solvent on a rotary evaporator gives a quantitative yield of 2-methyl-3-phenylpropionic acid having an enantiomeric purity of 30percent ee. **With** hydrogen, di(norbornadiene)rhodium(I) tetrafluoroborate, (S)-1-diphenylphosphino-2-[α-(S)-methoxy(o-diphenylphosphinophenyl)methyl]ferrocene **in** methanol, Time= 19h, T= 25 °C , p= 3750.38Torr , Product distribution / selectivity **Patent**; **UMICORE AG and CO. KG**; WO2005/108409; (2005); (A2) English View in Reaxys
	Example Name B.1 The method of carrying out the hydrogenations and the determination of the optical yields ee is described in general terms by W. Weissensteiner et al in Organometallics 21 (2002), pages 1766-1774. The catalysts are in each case prepared in situ in the solvent by mixing of the ligand and metal complex as catalyst precursor (unless indicated otherwise = [Rh(norbornadiene)2]BF4). Unless indicated otherwise, the substrate concentration is 0.25 mol/l. The determination of conversion and ee of MAA is carried out by means of gas chromatography using a chiral column (Chirasil-L-val).The hydrogenations of EAC are carried out in ethanol in the presence of 5percent (v/v) of CF3CH2OH. The determination of the ee is carried out by means of gas chromatography using a chiral column [Lipodex E (30m); 1300C isothermal; 190 KPa H2]. In the hydrogenation of EOV, [RuI2(p-cumene)]2 is used as metal complex and catalyst precursor. The determination of the ee is carried out after reaction with trifluoroacetic anhydride by means of gas chromatography using a chiral column [Lipodex E (30m)].In the hydrogenation of MEA, [Ir(COD)Cl]2 is used as metal complex and catalyst precursor. The hydrogenation is carried out in bulk using 105 g of MEA (without solvent) in the presence of 70 mg of tetrabutylammonium iodide and 10 ml of acetic acid. **With** hydrogen, di(norbornadiene)rhodium(I) tetrafluoroborate, $C_{62}H_{78}FeP_4$ **in** methanol, Time= 1h, T= 25 °C , p= 750.075Torr , Product distribution / selectivity **Patent**; **SOLVIAS AG**; WO2006/3195; (2006); (A1) English View in Reaxys
	Example Name B.1 The method of carrying out the hydrogenations and the determination of the optical yields ee is described in general terms by W. Weissensteiner et al in Organometallics 21 (2002), pages 1766-1774. The catalysts are in each case prepared in situ in the solvent by mixing of the ligand and metal complex as catalyst precursor (unless indicated otherwise = [Rh(norbornadiene)2]BF4). Unless indicated otherwise, the substrate concentration is 0.25 mol/l. The determination of conversion and ee of MAA is carried out by means of gas chromatography using a chiral column (Chirasil-L-val).The hydrogenations of EAC are carried out in ethanol in the presence of 5percent (v/v) of CF3CH2OH. The determination of the ee is carried out by means of gas chromatography using a chiral column [Lipodex E (30m); 1300C isothermal; 190 KPa H2]. In the hydrogenation of EOV, [RuI2(p-cumene)]2 is used as metal complex and catalyst precursor. The determination of the ee is carried out after reaction with trifluoroacetic anhydride by means of gas chromatography using a chiral column [Lipodex E (30m)].In the hydrogenation of MEA, [Ir(COD)Cl]2 is used as metal

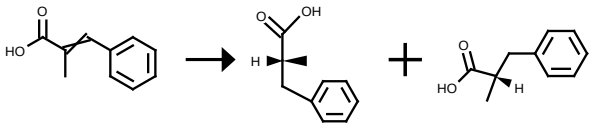
	complex and catalyst precursor. The hydrogenation is carried out in bulk using 105 g of MEA (without solvent) in the presence of 70 mg of tetrabutylammonium iodide and 10 ml of acetic acid. **With** hydrogen, triethylamine, di(norbornadiene)rhodium(I) tetrafluoroborate, $C_{64}H_{60}FeN_2P_4$ **in** tetrahydrofuran, Time= 1h, T= 25 °C , p= 3750.38Torr , Product distribution / selectivity **Patent**; **SOLVIAS AG**; WO2006/3195; (2006); (A1) English View in Reaxys



Rx-ID: 305298 View in Reaxys

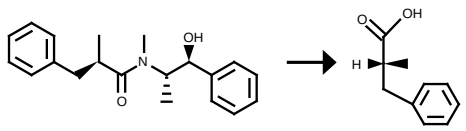
Yield	Conditions & References
86.50 %	**With** magnesium, methanol **Verma, Raman K.; Singla, Rubina; Punniyakoti, V. T.**; Medicinal Chemistry Research; **vol.** 13; nb. 8-9; (2004); p. 660 - 676 View in Reaxys
68.2 %	**With** H_2, KOH, $RhCl(PPh_3)2$-$(Ph_2PO_2CCH{=}CMe_2)$ **in** acetone, Time= 17h, T= 22 °C , p= 2280Torr **Preston, Sheila A.; Cupertino, Domenico C.; Palma-Ramirez, Pilar; Cole-Hamilton, David J.**; Journal of the Chemical Society, Chemical Communications; nb. 12; (1986); p. 977 - 978 View in Reaxys
	With H_2, NEt_3, $<Rh(PPh_3)2(Ph_2PO_2CCMe{=}CHPh)>PF_6$ **in** tetrahydrofuran, Time= 20h, p= 2280Torr , Ambient temperature, various catalysts, other bases; other substituted propenoic acids and hexene, Product distribution, Mechanism **Iraqi, Ahmed; Fairfax, Neil R.; Preston, Sheila A.; Cupertino, Domenico C.; Irvine, Derek J.; Cole-Hamilton, David J.**; Journal of the Chemical Society, Dalton Transactions: Inorganic Chemistry (1972-1999); nb. 8; (1991); p. 1929 - 1936 View in Reaxys
	With ammonium formate, $Rh(PPh_3)3Cl$ **in** dimethylsulfoxide, H_2O, Time= 0.0833333h, Irradiation, also without microwave irradiation in var. temp.; also 2H labelled formate salts; also cinnamic acid, Product distribution **Al-Qahtani, Mohammed H.; Cleator, Nicola; Danks, Timothy N.; Garman, Russell N.; Jones, John R.; et al.**; Journal of Chemical Research, Synopses; nb. 7; (1998); p. 400 - 401 View in Reaxys
	With diluted alcohol, sodium amalgam **Conrad; Bischoff**; Justus Liebigs Annalen der Chemie; **vol.** 204; (1880); p. 180 View in Reaxys
	With aq. NaOH, Raney-Ni **Watson,M.B.; Youngson,G.W.**; Journal of the Chemical Society [Section] C: Organic; (1968); p. 258 - 262 View in Reaxys
	With H_2, NEt_3, $<RhCl(PPh_3)2(PH_2PO_2CCMe{=}CHPh)>$ **in** tetrahydrofuran, Time= 20h, p= 2280Torr , Ambient temperature, Yield given **Iraqi, Ahmed; Fairfax, Neil R.; Preston, Sheila A.; Cupertino, Domenico C.; Irvine, Derek J.; Cole-Hamilton, David J.**; Journal of the Chemical Society, Dalton Transactions: Inorganic Chemistry (1972-1999); nb. 8; (1991); p. 1929 - 1936 View in Reaxys
	Example Name 60.b Example Title b b

	α-Methyl-hydrocinnamic acid A solution of α-methyl cinnamic acid (10.0 g., 61.7 mmol.) in dry methanol (250 ml.) was treated with 10percent palladium on carbon and hydrogenated (balloon used) at room temperature for 16 hours. The reaction mixture was diluted with methanol (250 ml.), filtered through a Celite pad in a millipore unit, washing the pad well with methanol (2*100 ml.). The clear filtrate was evaporated to dryness to give 10.225 g. of title product as a thick syrup. **With** palladium **in** methanol **Patent**; **E. R. Squibb and Sons, Inc.**; US5552397; (1996); (A1) English View in Reaxys



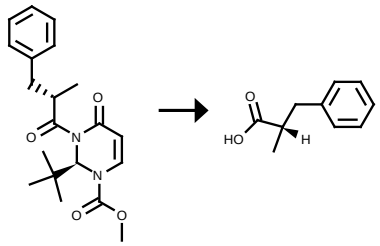
Rx-ID: 28260217 View in Reaxys

Yield	Conditions & References
	Example Name D.3 0.41 g (2.53 mmol) of 2-methylcinnamic acid and 5 ml of degassed methanol are introduced in succession into a Schlenk vessel filled with argon. A catalyst solution consisting of 4.73 mg (0.01265 mmol) of $[Rh(norbornadiene)_2]BF_4$, 8.77 mg (0.0133 mmol) of ligand A and 5 ml of degassed methanol is prepared in a second Schlenk vessel filled with argon. This solution and the catalyst solution are then transferred in succession by means of a steel capillary into a 50 ml autoclave filled with argon. The ratio of substrate/catalyst is 200. The autoclave is closed and a pressure of 5 bar is set by means of 4 flushing cycles (pressurization to 10 bar of hydrogen). The autoclave is thermostated at 25.deg. C. and the reaction is started by switching on the stirrer. The reactor is stirred for 19 hours. After opening the autoclave, a reddish reaction solution is isolated. The conversion is quantitative (determined by means of GC and ^{1}H-NMR). Removal of the solvent on a rotary evaporator gives a quantitative yield of 2-methyl-3-phenylpropionic acid having an enantiomeric purity of 29percent ee (determined by means of HPLC after conversion into the methyl ester; column: Chiracel OB.). **With** hydrogen, (S)Fc-α-S(C_5H_5)Fe(C_5H_3(PPh_2)CH(OH)C_6H_4(PPh_2)), [Rh(norbornadiene)2]BF_4 **in** methanol, Time= 19h, T= 25 °C , p= 7500.75Torr , Product distribution / selectivity **Patent**; **Lotz, Matthias; Spindler, Felix**; US2008/287698; (2008); (A1) English View in Reaxys
	Example Name D.3 A method similar to that of Example D3 is employed. 8.96 mg (0.0133 mmol) of methoxy-, TANIAPHOS are used in place of the ligand A. The conversion is 100percent. Removal of the solvent on a rotary evaporator gives a quantitative yield of 2-methyl-3-phenylpropionic acid having an enantiomeric purity of 30percent ee. **With** hydrogen, (S)-1-diphenylphosphino-2-[α-(S)-methoxy(o-diphenylphosphinophenyl)methyl]ferrocene, [Rh(norbornadiene)2]BF_4 **in** methanol, Time= 19h, T= 25 °C , p= 7500.75Torr , Product distribution / selectivity **Patent**; **Lotz, Matthias; Spindler, Felix**; US2008/287698; (2008); (A1) English View in Reaxys
	With diphenyl{1-[(S)-2,6-bis-trimethylsilyl-3,5-dioxa-4-phospha-cyclohepta(2,1-a;3,4-a')dinaphthalen-4-yl]-3-methyl-2-indolyl}phosphine, di(norbornadiene)rhodium(I) tetrafluoroborate, hydrogen **in** dichloromethane, Time= 20h, T= 20 °C , p= 7500.75Torr , Inert atmosphere, optical yield given as percent ee **Wassenaar, Jeroen; Reek, Joost N. H.; Kuil, Mark**; Advanced Synthesis and Catalysis; **vol.** 350; nb. 10; (2008); p. 1610 - 1614 View in Reaxys



Rx-ID: 4016112 View in Reaxys

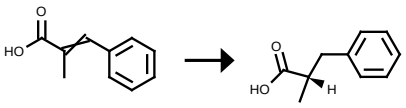
Yield	Conditions & References
95 %	**With** 9 N aq. H_2SO_4 **in** dioxane, Time= 6h, Heating **Myers, Andrew G.; Yang, Bryant H.; Chen, Hou; McKinstry, Lydia; Kopecky, David J.; Gleason, James L.**; Journal of the American Chemical Society; **vol.** 119; nb. 28; (1997); p. 6496 - 6511 View in Reaxys
87 %	**With** 18 N H_2SO_4 **in** dioxane, Heating **Myers, Andrew G.; Yang, Bryant H.; Chen, Hou; Gleason, James L.**; Journal of the American Chemical Society; **vol.** 116; nb. 20; (1994); p. 9361 - 9362 View in Reaxys
83 %	**With** H_2SO_4 **in** dioxane, Time= 1h, Heating **Bach, Jordi; Galobardes, Marta; Garcia, Jordi; Romea, Pedro; Tey, Cristina; et al.**; Tetrahedron Letters; **vol.** 39; nb. 37; (1998); p. 6765 - 6768 View in Reaxys



Rx-ID: 2513753 View in Reaxys

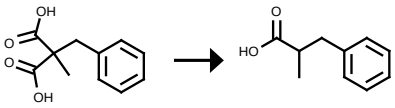
Yield	Conditions & References
77 %	**With** 30percent aq. H_2O_2, aq. LiOH **in** tetrahydrofuran, Time= 0.333333h **Chu, Kent S.; Negrete, George R.; Konopelski, Joseph P.; Lakner, Frederick J.; Woo, Nam-Tae; Olmstead, Marilyn M.**; Journal of the American Chemical Society; **vol.** 114; nb. 5; (1992); p. 1800 - 1812 View in Reaxys
	Reaction Steps: 2 1: aq. NaOH / methanol / 0.67 h / 4 °C 2: 1.) 30percent aq. H_2O_2, aq. LiOH, 2.) methyl chloroformate / 1.) THF, 30 min, 2.) THF, RT, 4 h **With** aq. NaOH, 1.) 30percent aq. H_2O_2, aq. LiOH, 2.) methyl chloroformate **in** methanol **Chu, Kent S.; Negrete, George R.; Konopelski, Joseph P.; Lakner, Frederick J.; Woo, Nam-Tae; Olmstead, Marilyn M.**; Journal of the American Chemical Society; **vol.** 114; nb. 5; (1992); p. 1800 - 1812 View in Reaxys
	Reaction Steps: 2 1: aq. NaOH / methanol / 0.67 h / 4 °C 2: 1.) 30percent aq. H_2O_2, aq. LiOH / 1.) THF, 30 min, 2.) THF, RT, 4 h **With** aq. NaOH, 1.) 30percent aq. H_2O_2, aq. LiOH **in** methanol **Chu, Kent S.; Negrete, George R.; Konopelski, Joseph P.; Lakner, Frederick J.; Woo, Nam-Tae; Olmstead, Marilyn M.**; Journal of the American Chemical Society; **vol.** 114; nb. 5; (1992); p. 1800 - 1812 View in Reaxys
	Reaction Steps: 2

	1: 80percent methanolic KOH / 0.33 h / 0 °C 2: LiOOH **With** 80percent methanolic KOH, LiOOH **Negrete, George R.; Konopelski, Joseph P.**; Tetrahedron: Asymmetry; **vol.** 2; nb. 2; (1991); p. 105 - 108 View in Reaxys



Rx-ID: 22694575 View in Reaxys

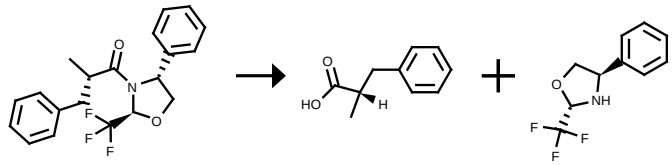
Yield	Conditions & References
99 %	**With** hydrogen, triethylamine **in** methanol, Time= 0.5h, T= 20 °C , p= 4560.31Torr , optical yield given as percent ee, enantioselective reaction **Li, Shen; Zhu, Shou-Fei; Zhang, Can-Ming; Song, Song; Zhou, Qi-Lin**; Journal of the American Chemical Society; **vol.** 130; nb. 27; (2008); p. 8584 - 8585 View in Reaxys
	Reaction Steps: 2 1: (i) H_2SO_4, (ii) H_2, Pd-C, EtOH 2: α-chymotrypsin, aq. NaOH **With** α-chymotrypsin, aq. NaOH **Cohen,S.G.; Milovanovic,A.**; Journal of the American Chemical Society; **vol.** 90; (1968); p. 3495 - 3502 View in Reaxys



Rx-ID: 765947 View in Reaxys

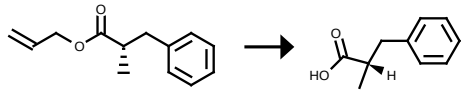
Yield	Conditions & References
95 %	**With** copper(I) oxide **in** acetonitrile, Time= 6h, Heating **Toussaint, Olivier; Capdevielle, Patrice; Maumy, Michel**; Synthesis; nb. 12; (1986); p. 1029 - 1031 View in Reaxys
	Conrad; Bischoff; Justus Liebigs Annalen der Chemie; **vol.** 204; (1880); p. 178 View in Reaxys
	(decarboxylation) **Terashima,S. et al.**; Chemical and Pharmaceutical Bulletin; **vol.** 18; (1970); p. 1124 - 1136 View in Reaxys
	in dimethylformamide, Time= 4h, T= 100 - 110 °C **Colombo, M.; Amici, M. De; Micheli, C. De; Pitre, D.; Carrea, G.; Riva, S.**; Tetrahedron: Asymmetry; **vol.** 2; nb. 10; (1991); p. 1021 - 1030 View in Reaxys
	With conc. H_2SO_4, Time= 1h, Heating, Yield given **Tyrrell, Elizabeth; Tsang, Michael W. H.; Skinner, George A.; Fawcett, John**; Tetrahedron; **vol.** 52; nb. 29; (1996); p. 9841 - 9852 View in Reaxys
	With H_2SO_4, Time= 3h, Heating **Dib, H. H.; Ibrahim, M. R.; Al-Awadi, N. A.; Ibrahim, Y. A.; Al-Awadi, S.**; International Journal of Chemical Kinetics; **vol.** 40; nb. 2; (2008); p. 51 - 58

	View in Reaxys
16.5 g	Time= 2h, T= 170 °C **Alcalde, Ermitas; Mesquida, Neus; Lopez-Perez, Sara; Frigola, Jordi; Merce, Ramon**; Organic and Biomolecular Chemistry; **vol.** 6; nb. 20; (2008); p. 3795 - 3810 View in Reaxys



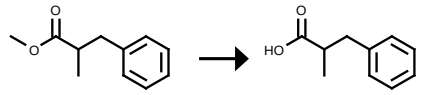
Rx-ID: 11214120 View in Reaxys

Yield	Conditions & References
97 %, 93 %	**Stage 1: With** $LiAlH_4$ **in** diethyl ether, Time= 0.5h, T= -10 °C **Stage 2: With** aq. NaCl **in** diethyl ether, T= -10 - 20 °C **Stage 3: With** 2-methyl-2-butene, sodium dihydrogen phosphate monohydrate, sodium chlorite **in** tetrahydrofuran, H_2O, 2-methyl-propan-2-ol, Time= 1.2h, T= 20 °C , Further stages. **Tessier, Arnaud; Pytkowicz, Julien; Brigaud, Thierry**; Angewandte Chemie, International Edition; **vol.** 45; nb. 22; (2006); p. 3677 - 3681; Angewandte Chemie; **vol.** 118; nb. 22; (2006); p. 3759 - 3763 View in Reaxys



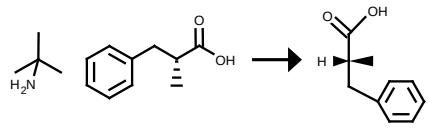
Rx-ID: 3231137 View in Reaxys

Yield	Conditions & References
89 %	**With** H_2O, <RhCl(PPh3)3> **in** ethanol, Time= 5h, Heating **Oppolzer, Wolfgang; Lienard, Philippe**; Helvetica Chimica Acta; **vol.** 75; nb. 8; (1992); p. 2572 - 2582 View in Reaxys



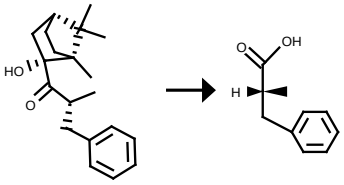
Rx-ID: 2042017 View in Reaxys

Yield	Conditions & References
100 %	**With** potassium hydroxide **in** ethanol, H_2O, Time= 8h, T= 0 °C **Kato, Dai-ichiro; Mitsuda, Satoshi; Ohta, Hiromichi**; Journal of Organic Chemistry; **vol.** 68; nb. 19; (2003); p. 7234 - 7242 View in Reaxys
95 %	**With** aq. NaOH **in** methanol, Time= 1h, Heating **Smonou, Ioulia; Orfanopoulos, Michael**; Synthetic Communications; **vol.** 20; nb. 9; (1990); p. 1387 - 1397 View in Reaxys



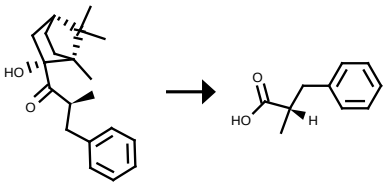
Rx-ID: 10652662 View in Reaxys

Yield	Conditions & References
	Example Name 12.i (λ)-2-Methy-3-phenylpropionic acid ter/-butylamine salt, reaction time 40 minutes, conversion 100percent. The free acid was liberated by partitioning between dichloromethane and 2M HCl. The organic layer was dried (Na_2SO_4), filtered and the solvent was evaporated, then the product was distilled (kugelrohr, 150 ^{0}C, 0.5 mbar) to give (λ)-2-Methy-3- phenylpropionic acid as a colorless liquid, [α] I ^{1} DI -22.1, c = 1.02, $CHCl_3$. Lit. (E. Tyrell,M.W.H. Tang, G.A. Skinner and J. Fawcett, Tetrahedron, 1996, 52, 9841-9852, [α] I 2 ^0^0 -23.1 c = l, $CHCl_3$). ee 85percent (derivatised using TMS-diazomethane, Chirasil Dex CB column, 25m x 0.25 mm, injector/detector 200 ^{0}C, helium 20 psi, 100 ^{0}C for 21 minutes then ramp at 15 .deg.C/min to 200 ^{0}C, hold for 5 minutes, retention times R 30.40 minutes, S 31.06 minutes, (E)-methyl 2-methylcinnamate, 34.79 minutes). ^{1}H NMR analysis of the (S)- <n="32"/>methyl mandelate (E. Tyrell, M.W.H. Tang, G.A. Skinner and J. Fawcett, Tetrahedron, 1996, 52, 9841 -9852) confirmed assignment of (^-configuration. **With** hydrogen chloride **in** dichloromethane, water **Patent**; **DOW GLOBAL TECHNOLOGIES INC.**; WO2007/123957; (2007); (A2) English View in Reaxys



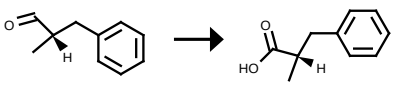
Rx-ID: 8912508 View in Reaxys

Yield	Conditions & References
95 %	**With** CAN **in** acetonitrile, H_2O, Time= 1h, T= 0 °C **Palomo, Claudio; Oiarbide, Mikel; Mielgo, Antonia; Gonzalez, Alberto; Garcia, Jesus M.; Landa, Cristina; Lecumberri, Ainara; Linden, Anthony**; Organic Letters; **vol.** 3; nb. 21; (2001); p. 3249 - 3252 View in Reaxys



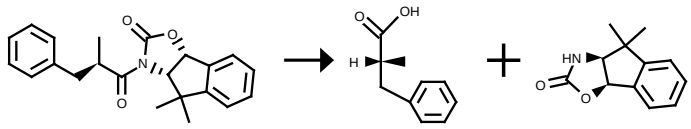
Rx-ID: 8912509 View in Reaxys

Yield	Conditions & References
90 %	**With** CAN **in** acetonitrile, H_2O, Time= 1h, T= 0 °C **Palomo, Claudio; Oiarbide, Mikel; Mielgo, Antonia; Gonzalez, Alberto; Garcia, Jesus M.; Landa, Cristina; Lecumberri, Ainara; Linden, Anthony**; Organic Letters; **vol.** 3; nb. 21; (2001); p. 3249 - 3252 View in Reaxys



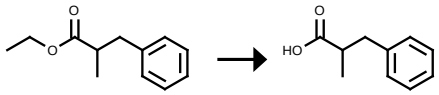
Rx-ID: 2147536 View in Reaxys

Yield	Conditions & References
90 %	**With** chromic acid, water **in** diethyl ether, Time= 2h, T <25 deg C **Rangaishenvi, Milind V.; Singaram, Bakthan; Brown, Herbert C.**; Journal of Organic Chemistry; **vol.** 56; nb. 10; (1991); p. 3286 - 3294 View in Reaxys



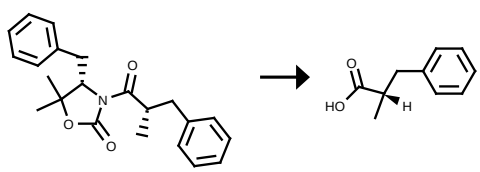
Rx-ID: 4368729 View in Reaxys

Yield	Conditions & References
100 %, 95 %	**With** aq. LiOOH **in** tetrahydrofuran, T= 0 °C **Sudo, Atsushi; Saigo, Kazuhiko**; Tetrahedron: Asymmetry; **vol.** 6; nb. 9; (1995); p. 2153 - 2156 View in Reaxys
100 %, 95 %	**With** aq. H_2O_2, LiOH **in** tetrahydrofuran, Time= 2.5h, T= 0 °C **Sudo, Atsushi; Saigo, Kazuhiko**; Tetrahedron: Asymmetry; **vol.** 7; nb. 10; (1996); p. 2939 - 2956 View in Reaxys



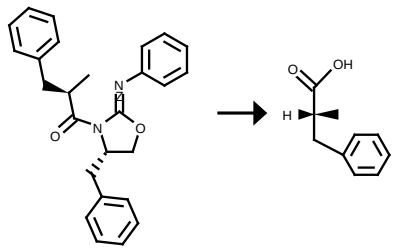
Rx-ID: 1992712 View in Reaxys

Yield	Conditions & References
74 %	**With** H_2O/OH- **in** ethanol, Time= 5h, Heating **Knorr, Rudolf; Lattke, Ernst**; Chemische Berichte; **vol.** 114; nb. 6; (1981); p. 2116 - 2131 View in Reaxys
	With aq. KOH **Crombie, Aimee L.; Kane, John L.; Shea, Kevin M.; Danheiser, Rick L.**; Journal of Organic Chemistry; **vol.** 69; nb. 25; (2004); p. 8652 - 8667 View in Reaxys
	With KOH, H_2O **Kane, John L.; Shea, Kevin M.; Crombie, Aimee L.; Danheiser, Rick L.**; Organic Letters; **vol.** 3; nb. 7; (2001); p. 1081 - 1084 View in Reaxys



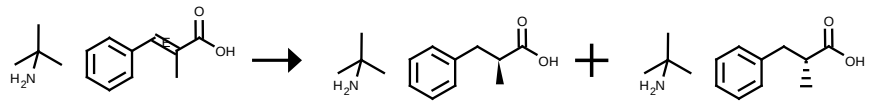
Rx-ID: 4201083 View in Reaxys

Yield	Conditions & References
100 %	**With** LiOH, water **in** tetrahydrofuran, T= 0 - 25 °C **Davies, Stephen G.; Sanganee, Hitesh J.**; Tetrahedron: Asymmetry; **vol.** 6; nb. 3; (1995); p. 671 - 674 View in Reaxys



Rx-ID: 9043914 View in Reaxys

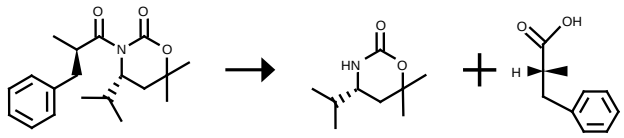
Yield	Conditions & References
96 %	**With** aq. NaOH **in** dioxane, Time= 0.5h, Heating **Lee, Gue-Jae; Kim, Taek Hyeon; Kim, Jae Nyoung; Lee, Uk**; Tetrahedron: Asymmetry; **vol.** 13; nb. 1; (2002); p. 9 - 12 View in Reaxys



Rx-ID: 10652632 View in Reaxys

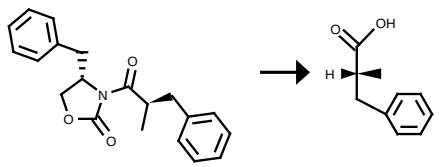
Yield	Conditions & References
	Example Name 12.v **With** hydrogen, [((R,R)-Me-5-Fc)Rh(COD)]$^{(1+)}$ **in** methanol, Time= 18h, T= 25 °C , p= 7500.75Torr , Product distribution / selectivity **Patent**; **DOW GLOBAL TECHNOLOGIES INC.**; WO2007/123957; (2007); (A2) English View in Reaxys
	Example Name 12.v **With** hydrogen, [((R,R)-Et-5-Fc)Rh(COD)]$^{(1+)}$ **in** methanol, Time= 18h, T= 25 °C , p= 7500.75Torr , Product distribution / selectivity **Patent**; **DOW GLOBAL TECHNOLOGIES INC.**; WO2007/123957; (2007); (A2) English View in Reaxys
	Example Name 12.v **With** hydrogen, [((R,R)-Ph-BPE)Rh(COD)]$^{(1+)}$ **in** methanol, Time= 18h, T= 25 °C , p= 7500.75Torr , Product distribution / selectivity **Patent**; **DOW GLOBAL TECHNOLOGIES INC.**; WO2007/123957; (2007); (A2) English View in Reaxys
	Example Name 12.v **With** hydrogen, [((R,R)-iPr-5-Fc)Rh(COD)]$^{(1+)}$ **in** methanol, Time= 18h, T= 25 °C , p= 7500.75Torr , Product distribution / selectivity **Patent**; **DOW GLOBAL TECHNOLOGIES INC.**; WO2007/123957; (2007); (A2) English View in Reaxys

	With hydrogen, [(bis(diphenylphospholanyl)ferrocene)Rh(cyclooctadiene)]BF_4 **in** methanol, Time= 1h, T= 25 °C , p= 7500.75Torr , Title compound not separated from byproducts. **Fox, Martin E.; Jackson, Mark; Lennon, Ian C.; Klosin, Jerzy; Abboud, Khalil A.**; Journal of Organic Chemistry; **vol.** 73; nb. 3; (2008); p. 775 - 784 View in Reaxys
	With hydrogen, [(bis(di-iPr-phospholanyl)ferrocene)Rh(cyclooctadiene)]BF_4 **in** methanol, Time= 18h, T= 25 °C , p= 7500.75Torr , Title compound not separated from byproducts. **Fox, Martin E.; Jackson, Mark; Lennon, Ian C.; Klosin, Jerzy; Abboud, Khalil A.**; Journal of Organic Chemistry; **vol.** 73; nb. 3; (2008); p. 775 - 784 View in Reaxys



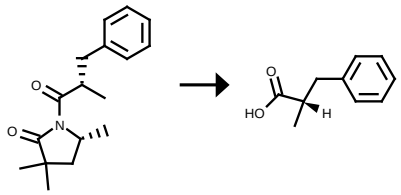
Rx-ID: 11137427 View in Reaxys

Yield	Conditions & References
100 %, 12 mg	**With** aq. H_2O_2, LiOH **in** tetrahydrofuran, Time= 16h, T= 0 - 20 °C **Davies, Stephen G.; Garner, A. Christopher; Roberts, Paul M.; Smith, Andrew D.; Sweet, Miles J.; Thomson, James E.**; Organic and Biomolecular Chemistry; **vol.** 4; nb. 14; (2006); p. 2753 - 2768 View in Reaxys



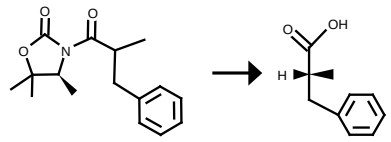
Rx-ID: 4493212 View in Reaxys

Yield	Conditions & References
78 %	**With** aq. LiOH, H_2O_2 **in** tetrahydrofuran, Time= 1h, T= 0 °C **Tyrrell, Elizabeth; Tsang, Michael W. H.; Skinner, George A.; Fawcett, John**; Tetrahedron; **vol.** 52; nb. 29; (1996); p. 9841 - 9852 View in Reaxys



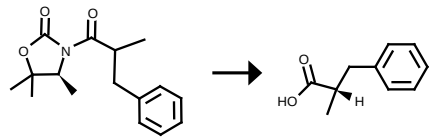
Rx-ID: 9026989 View in Reaxys

Yield	Conditions & References
83 %	**With** aq. LiOH **in** tetrahydrofuran, T= 0 °C **Davies, Stephen G.; Dixon, Darren J.; Doisneau, Gilles J.-M.; Prodger, Jeremy C.; Sanganee, Hitesh J.**; Tetrahedron: Asymmetry; **vol.** 13; nb. 6; (2002); p. 647 - 658 View in Reaxys



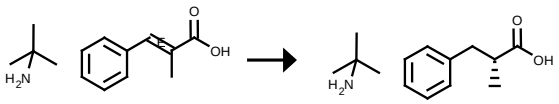
Rx-ID: 10462650 View in Reaxys

Yield	Conditions & References
77 %	**With** aq. LiOH **in** tetrahydrofuran, T= 0 - 20 °C **Suzuki, Takayoshi; Hisakawa, Shinya; Itoh, Yukihiro; Maruyama, Sakiko; Kurotaki, Mineko; Nakagawa, Hidehiko; Miyata, Naoki**; Bioorganic & Medicinal Chemistry Letters; **vol.** 17; nb. 6; (2007); p. 1558 - 1561 View in Reaxys



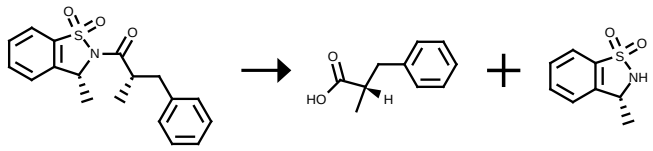
Rx-ID: 10462651 View in Reaxys

Yield	Conditions & References
78 %	**With** aq. LiOH **in** tetrahydrofuran, T= 0 - 20 °C **Suzuki, Takayoshi; Hisakawa, Shinya; Itoh, Yukihiro; Maruyama, Sakiko; Kurotaki, Mineko; Nakagawa, Hidehiko; Miyata, Naoki**; Bioorganic & Medicinal Chemistry Letters; **vol.** 17; nb. 6; (2007); p. 1558 - 1561 View in Reaxys



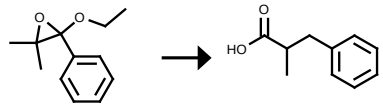
Rx-ID: 10652623 View in Reaxys

Yield	Conditions & References
	Example Name 12.i; 12.iv (λ)-2-Methy-3-phenylpropionic acid ter/-butylamine salt, reaction time 40 minutes, conversion 100percent. The free acid was liberated by partitioning between dichloromethane and 2M HCl. The organic layer was dried (Na_2SO_4), filtered and the solvent was evaporated, then the product was distilled (kugelrohr, 150 ^{0}C, 0.5 mbar) to give (λ)-2-Methy-3- phenylpropionic acid as a colorless liquid, [α] I ^{1} DI -22.1, c = 1.02, $CHCl_3$. Lit. (E. Tyrell,M.W.H. Tang, G.A. Skinner and J. Fawcett, Tetrahedron, 1996, 52, 9841-9852, [α] I 2 ^0^0 -23.1 c = l, $CHCl_3$). ee 85percent (derivatised using TMS-diazomethane, Chirasil Dex CB column, 25m x 0.25 mm, injector/detector 200 ^{0}C, helium 20 psi, 100 ^{0}C for 21 minutes then ramp at 15 .deg.C/min to 200 ^{0}C, hold for 5 minutes, retention times R 30.40 minutes, S 31.06 minutes, (E)-methyl 2-methylcinnamate, 34.79 minutes). ^{1}H NMR analysis of the (S)- <n="32"/>methyl mandelate (E. Tyrell, M.W.H. Tang, G.A. Skinner and J. Fawcett, Tetrahedron, 1996, 52, 9841 -9852) confirmed assignment of (^-configuration. **With** hydrogen, 1,1'-bis[(2S,5S)-diphenylphospholano]ferrocene(1,5-cyclooctadiene)rhodium(I) tetrafluoroborate **in** methanol, Time= 0.666667h, T= 25 - 30 °C , p= 7500.75Torr , Product distribution / selectivity **Patent**; **DOW GLOBAL TECHNOLOGIES INC.**; WO2007/123957; (2007); (A2) English View in Reaxys
	Example Name 12.iv **With** hydrogen, 1,1'-bis[(2S,5S)-diphenylphospholano]ferrocene(1,5-cyclooctadiene)rhodium(I) tetrafluoroborate **in** methanol, Time= 0.666667h, T= 30 °C , p= 7500.75Torr , Product distribution / selectivity **Patent**; **DOW GLOBAL TECHNOLOGIES INC.**; WO2007/123957; (2007); (A2) English View in Reaxys



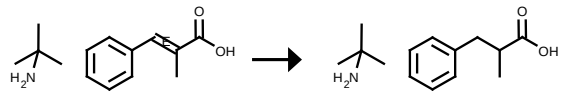
Rx-ID: 2474734 View in Reaxys

Yield	Conditions & References
81 %	**With** aq. H_2O_2 (30 percent), LiOH*H_2O **in** tetrahydrofuran, H_2O, T= 0 °C **Oppolzer, Wolfgang; Rodriguez, Ines; Starkemann, Christian; Walther, Eric**; Tetrahedron Letters; **vol.** 31; nb. 35; (1990); p. 5019 - 5022 View in Reaxys



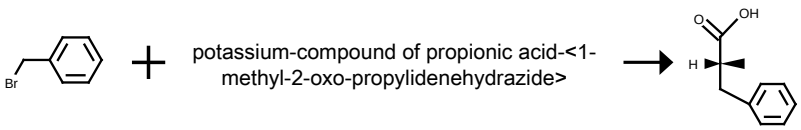
Rx-ID: 4818648 View in Reaxys

Yield	Conditions & References
89 %	**With** H_3O+ **in** tetrahydrofuran, T= 100 °C **Suprun, W. Y.**; Journal fuer Praktische Chemie/Chemiker-Zeitung; **vol.** 340; nb. 3; (1998); p. 247 - 255 View in Reaxys



Rx-ID: 10652636 View in Reaxys

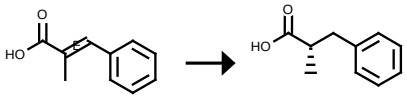
Yield	Conditions & References
	Example Name 12.v **With** hydrogen, (S,S)-2,3-bis(2,5-diphenyl-phospholan-1-yl)-(1,5-cyclooctadiene)rhodium(I) tetrafluoroborate **in** methanol, Time= 18h, T= 25 °C , p= 7500.75Torr , Product distribution / selectivity **Patent**; **DOW GLOBAL TECHNOLOGIES INC.**; WO2007/123957; (2007); (A2) English View in Reaxys
	With hydrogen, [bis(diphenylphospholanyl)quinoxaline-Rh(cyclooctadiene)]BF_4 **in** methanol, Time= 18h, T= 25 °C , p= 7500.75Torr **Fox, Martin E.; Jackson, Mark; Lennon, Ian C.; Klosin, Jerzy; Abboud, Khalil A.**; Journal of Organic Chemistry; **vol.** 73; nb. 3; (2008); p. 775 - 784 View in Reaxys



Rx-ID: 16745184 View in Reaxys

Yield	Conditions & References
	Reaction Steps: 2 1: 82 percent / LDA, LiCl / tetrahydrofuran / 0.75 h / 0 °C 2: 83 percent / H_2SO_4 / dioxane / 1 h / Heating **With** LDA, LiCl, H_2SO_4 **in** tetrahydrofuran, dioxane

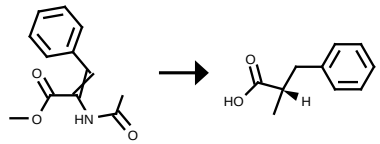
	Bach, Jordi; Galobardes, Marta; Garcia, Jordi; Romea, Pedro; Tey, Cristina; et al.; Tetrahedron Letters; **vol.** 39; nb. 37; (1998); p. 6765 - 6768 View in Reaxys
	Reaction Steps: 2 1: 90 percent / NaHMDS 2: LiOH, H_2O_2 **With** NaHMDS, LiOH, H_2O_2 **Simpson, Thomas J.; Smith, Robert W.; Westaway, Susan M.; Willis, Christine L.; Buss, Antony D.; et al.**; Tetrahedron Letters; **vol.** 38; nb. 30; (1997); p. 5367 - 5370 View in Reaxys
	Reaction Steps: 2 1: 90 percent / LiCl, diisopropylamine, n-BuLi / tetrahydrofuran; hexane / 0.25 h / 0 °C 2: 95 percent / 9 N aq. H_2SO_4 / dioxane / 6 h / Heating **With** LiCl, diisopropylamine, n-BuLi, 9 N aq. H_2SO_4 **in** tetrahydrofuran, hexane, dioxane **Myers, Andrew G.; Yang, Bryant H.; Chen, Hou; McKinstry, Lydia; Kopecky, David J.; Gleason, James L.**; Journal of the American Chemical Society; **vol.** 119; nb. 28; (1997); p. 6496 - 6511 View in Reaxys



rel-configuration

Rx-ID: 25598370 View in Reaxys

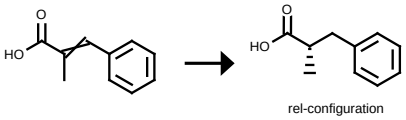
Yield	Conditions & References
	Example Name D.10 The experimental procedure is similar to that of Example D1. 2.53 mmol of starting material are always used, and the ratio of substrate to catalyst (s/c) is always 200. The reaction parameters and the results are summarized in Table 1 below. In Examples 5, 11, 16 and 20, toluene (10 ml) is used as solvent. In Examples 6 to 8,12,13, 17, 18, 21 and 22 , ethanol (10 ml, in Examples 6 and 17 9.5 ml) is used as solvent. In Examples 9, 10, 14, 15 and 19, methanol (10 ml) is used as solvent. **With** hydrogen, di(norbornadiene)rhodium(I) tetrafluoroborate, (S)-1-di(3,5-dimethyl-4-methoxyphenyl)phosphino-2-[α-(S)-hydroxy(o-diphenylphosphinophenyl)methyl]ferrocene **in** methanol, Time= 19h, T= 25 °C , p= 3750.38Torr , Product distribution / selectivity **Patent**; **UMICORE AG and CO. KG**; WO2005/108409; (2005); (A2) English View in Reaxys



Rx-ID: 28260214 View in Reaxys

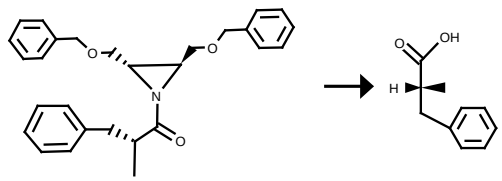
Yield	Conditions & References
	Example Name D.14 The experimental procedure is similar to that of Example DI. 2.53 mmol of starting material are always used, and the ratio of substrate to catalyst (sic) is always 200. The reaction parameters and the results are summarized in Table I below.In Examples 5, 11, 16 and 20, toluene (10 ml) is used as solvent. In Examples 6 to 8, 12, 13, 17, 18, 21 and 22, ethanol (10 ml, in Examples 6 and 17 9.5 ml) is used as solvent. In Examples 9, 10, 14, 15 and 19, methanol (10 ml) is used as solvent. **With** hydrogen, (S)-1-di(3,5-dimethyl-4-methoxyphenyl)phosphino-2-[α-(S)-hydroxy(o-di(3,5-bis(trifluoromethyl)phenyl)phosphinophenyl)methyl]ferrocene, $[Rh(norbornadiene)2]BF_4$ **in** methanol, Time= 1h, T= 25 °C , p= 750.075Torr , Product distribution / selectivity

	Patent; **Lotz, Matthias; Spindler, Felix**; US2008/287698; (2008); (A1) English View in Reaxys



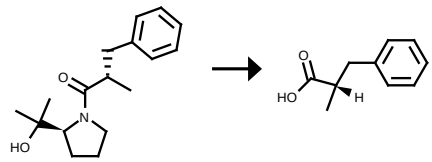
Rx-ID: 28260218 View in Reaxys

Yield	Conditions & References
	Example Name D.10 The experimental procedure is similar to that of Example DI. 2.53 mmol of starting material are always used, and the ratio of substrate to catalyst (sic) is always 200. The reaction parameters and the results are summarized in Table I below.In Examples 5, 11, 16 and 20, toluene (10 ml) is used as solvent. In Examples 6 to 8, 12, 13, 17, 18, 21 and 22, ethanol (10 ml, in Examples 6 and 17 9.5 ml) is used as solvent. In Examples 9, 10, 14, 15 and 19, methanol (10 ml) is used as solvent. **With** hydrogen, (S)-1-di(3,5-dimethyl-4-methoxyphenyl)phosphino-2-[α-(S)-hydroxy(o-diphenylphosphinophen-yl)methyl]ferrocene, [Rh(norbornadiene)2]BF_4 **in** methanol, Time= 19h, T= 25 °C , p= 3750.38Torr , Product distribu-tion / selectivity **Patent**; **Lotz, Matthias; Spindler, Felix**; US2008/287698; (2008); (A1) English View in Reaxys



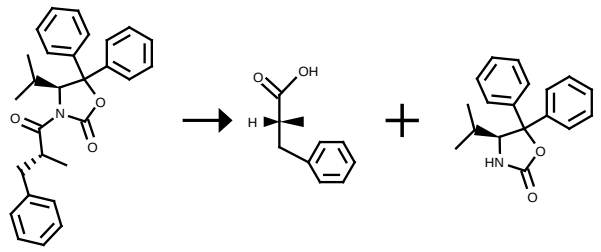
Rx-ID: 2515342 View in Reaxys

Yield	Conditions & References
63 %	**With** 30percent aq. H_2O_2, LiOH **in** tetrahydrofuran, H_2O, Time= 120h, Ambient temperature **Tanner, David; Birgersson, Carin; Gogoll, Adolf; Luthman, Kristina**; Tetrahedron; **vol.** 50; nb. 32; (1994); p. 9797 - 9824 View in Reaxys



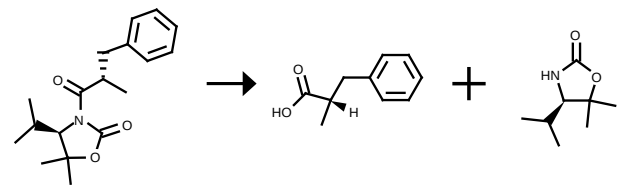
Rx-ID: 3499087 View in Reaxys

Yield	Conditions & References
76 %	**With** 3 M aq. HCl **in** dioxane, Time= 42h, T= 90 - 95 °C **Guoqiang, Lin; Hjalmarsson, Mats; Hoegberg, Hans-Erik; Jernstedt, Karen; Norin, Torbjoern**; Acta Chemica Scandinavica, Series B: Organic Chemistry and Biochemistry; **vol.** 38; nb. 9; (1984); p. 795 - 802 View in Reaxys



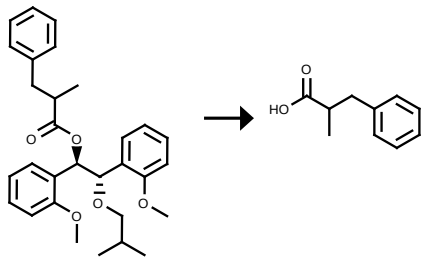
Rx-ID: 5114767 View in Reaxys

Yield	Conditions & References
79 %, 79 %	**With** LiOH*H_2O, H_2O_2 **in** H_2O, tetrahydrofuran, Time= 1.5h, T= 0 °C **Hintermann, Tobias; Seebach, Dieter**; Helvetica Chimica Acta; **vol.** 81; nb. 11; (1998); p. 2093 - 2126 View in Reaxys



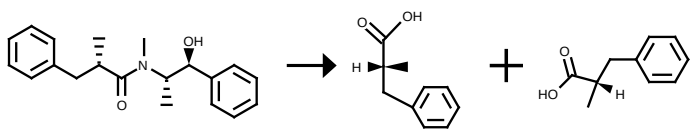
Rx-ID: 5118676 View in Reaxys

Yield	Conditions & References
96 %, 98 %	**With** LiOH*H_2O, H_2O **in** tetrahydrofuran, Time= 24h, Ambient temperature **Bull, Steven D.; Davies, Stephen G.; Jones, Simon; Sanganee, Hitesh J.**; Journal of the Chemical Society, Perkin Transactions 1: Organic and Bio-Organic Chemistry (1972-1999); nb. 4; (1999); p. 387 - 398 View in Reaxys



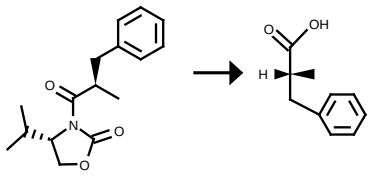
Rx-ID: 28576617 View in Reaxys

Yield	Conditions & References
82 %	**Stage 1: With** lithium hydroxide monohydrate, water **in** tetrahydrofuran, methanol, Time= 12h, T= 20 °C **Stage 2: With** water, sodium hydrogencarbonate **Stage 3: With** hydrogen chloride **in** water **Broeker, Joachim; Knollmueller, Max; Gaertner, Peter**; Tetrahedron: Asymmetry; **vol.** 20; nb. 3; (2009); p. 273 - 287 View in Reaxys



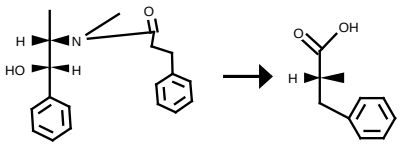
Rx-ID: 4016116 View in Reaxys

Yield	Conditions & References
	With tetra-n-butylammonium hydroxide **in** H_2O, 2-methyl-propan-2-ol, Heating, Title compound not separated from byproducts **Myers, Andrew G.; Yang, Bryant H.; Chen, Hou; Gleason, James L.**; Journal of the American Chemical Society; **vol.** 116; nb. 20; (1994); p. 9361 - 9362 View in Reaxys
	With aq. n-Bu_4NOH **in** 2-methyl-propan-2-ol, Heating, Yield given. Yields of byproduct given. Title compound not separated from byproducts **Myers, Andrew G.; Yang, Bryant H.; Chen, Hou; McKinstry, Lydia; Kopecky, David J.; Gleason, James L.**; Journal of the American Chemical Society; **vol.** 119; nb. 28; (1997); p. 6496 - 6511 View in Reaxys



Rx-ID: 4833359 View in Reaxys

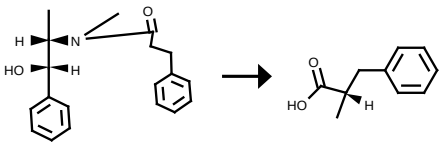
Yield	Conditions & References
	With LiOH, H_2O_2 **Simpson, Thomas J.; Smith, Robert W.; Westaway, Susan M.; Willis, Christine L.; Buss, Antony D.; et al.**; Tetrahedron Letters; **vol.** 38; nb. 30; (1997); p. 5367 - 5370 View in Reaxys
	Reaction Steps: 2 1: 93 percent / $PhCH_2OH$ / tetrahydrofuran / 1 h / 0 °C 2: hydrogen **With** $PhCH_2OH$, hydrogen **in** tetrahydrofuran **Evans, D. A.; Ennis, M. D.; Mathre, D. J.**; Journal of the American Chemical Society; **vol.** 104; nb. 6; (1982); p. 1737 - 1739 View in Reaxys



Rx-ID: 17169383 View in Reaxys

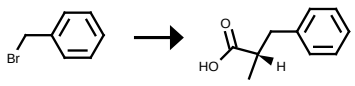
Yield	Conditions & References
	Reaction Steps: 2 1: 95 percent / LiCl, diisopropylamine, n-BuLi / tetrahydrofuran; hexane / -78 °C 2: aq. n-Bu_4NOH / 2-methyl-propan-2-ol / Heating **With** LiCl, diisopropylamine, n-BuLi, aq. n-Bu_4NOH **in** tetrahydrofuran, hexane, 2-methyl-propan-2-ol **Myers, Andrew G.; Yang, Bryant H.; Chen, Hou; McKinstry, Lydia; Kopecky, David J.; Gleason, James L.**; Journal of the American Chemical Society; **vol.** 119; nb. 28; (1997); p. 6496 - 6511 View in Reaxys
	Reaction Steps: 2 1: 1.) LDA, LiCl / 1.) THF, from -78 to 23 deg C, 80 min, 2.) THF, -78 deg C, 8 h 2: tetra-n-butylammonium hydroxide / H_2O; 2-methyl-propan-2-ol / Heating **With** 1.) LDA, LiCl, tetra-n-butylammonium hydroxide **in** H_2O, 2-methyl-propan-2-ol

	Myers, Andrew G.; Yang, Bryant H.; Chen, Hou; Gleason, James L.; Journal of the American Chemical Society; **vol.** 116; nb. 20; (1994); p. 9361 - 9362 View in Reaxys



Rx-ID: 17169384 View in Reaxys

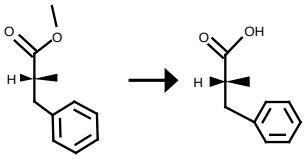
Yield	Conditions & References
	Reaction Steps: 2 1: 95 percent / LiCl, diisopropylamine, n-BuLi / tetrahydrofuran; hexane / -78 °C 2: aq. n-Bu_4NOH / 2-methyl-propan-2-ol / Heating **With** LiCl, diisopropylamine, n-BuLi, aq. n-Bu_4NOH **in** tetrahydrofuran, hexane, 2-methyl-propan-2-ol **Myers, Andrew G.; Yang, Bryant H.; Chen, Hou; McKinstry, Lydia; Kopecky, David J.; Gleason, James L.**; Journal of the American Chemical Society; **vol.** 119; nb. 28; (1997); p. 6496 - 6511 View in Reaxys
	Reaction Steps: 2 1: 1.) LDA, LiCl / 1.) THF, from -78 to 23 deg C, 80 min, 2.) THF, -78 deg C, 8 h 2: tetra-n-butylammonium hydroxide / H_2O; 2-methyl-propan-2-ol / Heating **With** 1.) LDA, LiCl, tetra-n-butylammonium hydroxide **in** H_2O, 2-methyl-propan-2-ol **Myers, Andrew G.; Yang, Bryant H.; Chen, Hou; Gleason, James L.**; Journal of the American Chemical Society; **vol.** 116; nb. 20; (1994); p. 9361 - 9362 View in Reaxys



Rx-ID: 20993453 View in Reaxys

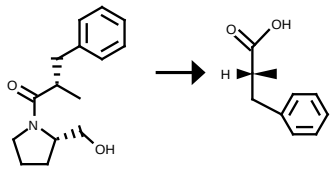
Yield	Conditions & References
	Reaction Steps: 2 1: 1.) hexamethyldisilylamide / 1.) THF, -78 deg C, 2.5 h, 2.) THF, -23 deg C, 4 h 2: 77 percent / 30percent aq. H_2O_2, aq. LiOH / tetrahydrofuran / 0.33 h **With** 1.) hexamethyldisilylamide, 30percent aq. H_2O_2, aq. LiOH **in** tetrahydrofuran **Chu, Kent S.; Negrete, George R.; Konopelski, Joseph P.; Lakner, Frederick J.; Woo, Nam-Tae; Olmstead, Marilyn M.**; Journal of the American Chemical Society; **vol.** 114; nb. 5; (1992); p. 1800 - 1812 View in Reaxys
	Reaction Steps: 3 1: 1.) hexamethyldisilylamide / 1.) THF, -78 deg C, 2.5 h, 2.) THF, -23 deg C, 4 h 2: aq. NaOH / methanol / 0.67 h / 4 °C 3: 1.) 30percent aq. H_2O_2, aq. LiOH, 2.) methyl chloroformate / 1.) THF, 30 min, 2.) THF, RT, 4 h **With** 1.) hexamethyldisilylamide, aq. NaOH, 1.) 30percent aq. H_2O_2, aq. LiOH, 2.) methyl chloroformate **in** methanol **Chu, Kent S.; Negrete, George R.; Konopelski, Joseph P.; Lakner, Frederick J.; Woo, Nam-Tae; Olmstead, Marilyn M.**; Journal of the American Chemical Society; **vol.** 114; nb. 5; (1992); p. 1800 - 1812 View in Reaxys
	Reaction Steps: 3 1: 1.) hexamethyldisilylamide / 1.) THF, -78 deg C, 2.5 h, 2.) THF, -23 deg C, 4 h 2: aq. NaOH / methanol / 0.67 h / 4 °C 3: 1.) 30percent aq. H_2O_2, aq. LiOH / 1.) THF, 30 min, 2.) THF, RT, 4 h **With** 1.) hexamethyldisilylamide, aq. NaOH, 1.) 30percent aq. H_2O_2, aq. LiOH **in** methanol

	Chu, Kent S.; Negrete, George R.; Konopelski, Joseph P.; Lakner, Frederick J.; Woo, Nam-Tae; Olmstead, Marilyn M.; Journal of the American Chemical Society; **vol.** 114; nb. 5; (1992); p. 1800 - 1812 View in Reaxys



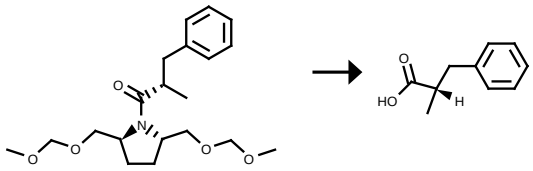
Rx-ID: 2199186 View in Reaxys

Yield	Conditions & References
92 %	**With** lipase from Candida cylindracea, Time= 4.5h, Ambient temperature, 0.1 M phosphate buffer, pH 7.0 **Delnick, Deborah L.; Margolin, Alexey L.**; Tetrahedron Letters; **vol.** 31; nb. 47; (1990); p. 6797 - 6798 View in Reaxys



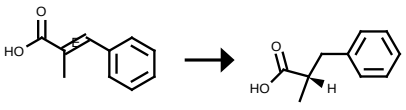
Rx-ID: 2658424 View in Reaxys

Yield	Conditions & References
92 %	**With** 1.0 N HCl, Time= 2h, T= 100 °C **Evans, D. A.; Takacs, J. M.**; Tetrahedron Letters; **vol.** 21; (1980); p. 4233 - 4236 View in Reaxys



Rx-ID: 2700540 View in Reaxys

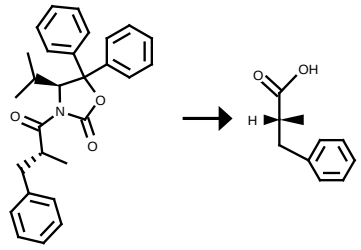
Yield	Conditions & References
90 %	**With** 1N HCl, Time= 3h, Heating **Kawanami, Yasuhiro; Ito, Yoshio; Kitagawa, Toshiyuki; Taniguchi, Yoshiyuki; Katsuki, Tsutomu; Yamaguchi, Masaru**; Tetrahedron Letters; **vol.** 25; nb. 8; (1984); p. 857 - 860 View in Reaxys



Rx-ID: 3962088 View in Reaxys

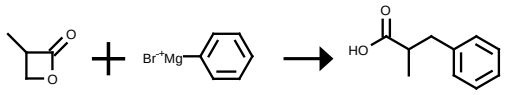
Yield	Conditions & References
51 % Spectr.	**With** H_2, (S,R)-<(P-N)RhNBD>ClO_4 **in** ethanol, Time= 2.7h, T= 30 °C , study of the asymmetric hydrogenation of various prochiral substrates with chiral ligands containing rhodium(I) complexes of ferrocenylphosphonium as asymmetric catalysts, Product distribution **Appelton, Trevor D.; Cullen, William R.; Evans, Sthephen; Kim, Tae-Jeong; Trotter, James**; Journal of Organometallic Chemistry; **vol.** 279; (1985); p. 5 - 22

	View in Reaxys
24 %Chromat.	**With** di(norbornadiene)rhodium(I) tetrafluoroborate, hydrogen **in** tetrahydrofuran, Time= 24h, T= 20 °C , p= 7500.75Torr , optical yield given as percent ee, enantioselective reaction **Lee, Jong-Dae; Thanh, Thien Co; Kim, Tae-Jeong; Sang, Ook Kang**; Synlett; nb. 5; (2009); p. 771 - 774 View in Reaxys



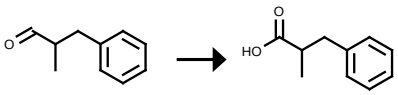
Rx-ID: 8837301 View in Reaxys

Yield	Conditions & References
60 %	**With** aq. LiOH **in** tetrahydrofuran, Time= 25h, T= 0 - 24 °C **Alexander, Karen; Cook, Stuart; Gibson, Colin L.; Kennedy, Alan R.**; Journal of the Chemical Society, Perkin Transactions 1; nb. 13; (2001); p. 1538 - 1549 View in Reaxys



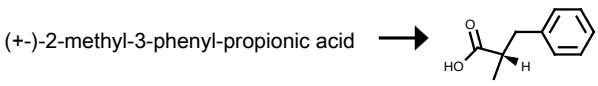
Rx-ID: 1522267 View in Reaxys

Yield	Conditions & References
52 %	**With** CuCl **in** tetrahydrofuran, Time= 0.25h, T= 0 °C **Sato, Toshio; Kawara, Tatsuo; Kawashima, Masatoshi; Fujisawa, Tamotsu**; Chemistry Letters; (1980); p. 571 - 574 View in Reaxys



Rx-ID: 2063579 View in Reaxys

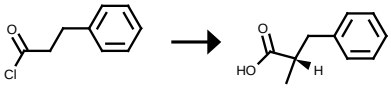
Yield	Conditions & References
80 %	**With** $KMnO_4$ **Nalesnik, Theodore E.; Freudenberger, John H.; Orchin, Milton**; Journal of Organometallic Chemistry; **vol.** 221; nb. 2; (1981); p. 193 - 198 View in Reaxys



Rx-ID: 7672198 View in Reaxys

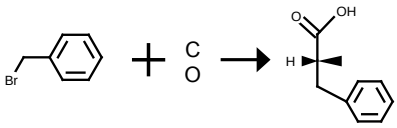
Yield	Conditions & References
	With quinine **Kenyon; Ross**; Journal of the Chemical Society; (1951); p. 3407,3409 View in Reaxys

	Akabori; Sakurai; Nippon Kagaku Zasshi; **vol.** 78; (1957); p. 1629; Chem.Abstr.; (1959); p. 21687 View in Reaxys **DeTar; Weis**; Journal of the American Chemical Society; **vol.** 79; (1957); p. 3045,3048 View in Reaxys **Nerdel; John**; Chemische Berichte; **vol.** 89; (1956); p. 1945,1949 View in Reaxys



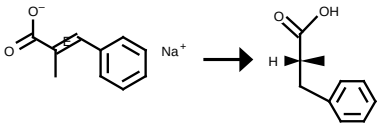
Rx-ID: 11430404 View in Reaxys

Yield	Conditions & References
	Reaction Steps: 3 1.1: 36 percent / LiHMDS / tetrahydrofuran / 12 h / -78 - 20 °C 2.1: KHMDS / tetrahydrofuran; toluene / 1 h / -78 °C 2.2: 38 percent / tetrahydrofuran; toluene / -78 - -40 °C 3.1: 10 mg / aq. H_2O_2; LiOH / tetrahydrofuran / 16 h / 0 - 20 °C **With** LiHMDS, KHMDS, aq. H_2O_2, LiOH **in** tetrahydrofuran, toluene **Davies, Stephen G.; Garner, A. Christopher; Roberts, Paul M.; Smith, Andrew D.; Sweet, Miles J.; Thomson, James E.**; Organic and Biomolecular Chemistry; **vol.** 4; nb. 14; (2006); p. 2753 - 2768 View in Reaxys
	Reaction Steps: 3 1.1: nBuLi / tetrahydrofuran / -78 °C 1.2: 83 percent / tetrahydrofuran / -78 °C 2.1: LDA / tetrahydrofuran / -78 °C 2.2: 63 percent / tetrahydrofuran / -78 - 20 °C 3.1: 78 percent / aq. LiOH / tetrahydrofuran / 0 - 20 °C **With** nBuLi, LDA, aq. LiOH **in** tetrahydrofuran **Suzuki, Takayoshi; Hisakawa, Shinya; Itoh, Yukihiro; Maruyama, Sakiko; Kurotaki, Mineko; Nakagawa, Hidehiko; Miyata, Naoki**; Bioorganic & Medicinal Chemistry Letters; **vol.** 17; nb. 6; (2007); p. 1558 - 1561 View in Reaxys
	Reaction Steps: 4 1: 82 percent / Et_3N / tetrahydrofuran / 1 h / 0 °C 2: 83 percent / Mg / diethyl ether / reflux, 4 h -> ambient temperature 3: LDA / tetrahydrofuran / -100 deg C, 2 h -> -50 deg C 4: 3 M aq. HCl / dioxane / 42 h / 90 - 95 °C **With** Et_3N, Mg, LDA, 3 M aq. HCl **in** tetrahydrofuran, diethyl ether, dioxane **Guoqiang, Lin; Hjalmarsson, Mats; Hoegberg, Hans-Erik; Jernstedt, Karen; Norin, Torbjoern**; Acta Chemica Scandinavica, Series B: Organic Chemistry and Biochemistry; **vol.** 38; nb. 9; (1984); p. 795 - 802 View in Reaxys
	Reaction Steps: 4 1: 82 percent / Et_3N / tetrahydrofuran / 1 h / 0 °C 2: 83 percent / Mg / diethyl ether / reflux, 4 h -> ambient temperature 3: LDA / tetrahydrofuran / -100 deg C, 2 h -> -50 deg C 4: 76 percent / 3 M aq. HCl / dioxane / 42 h / 90 - 95 °C **With** Et_3N, Mg, LDA, 3 M aq. HCl **in** tetrahydrofuran, diethyl ether, dioxane **Guoqiang, Lin; Hjalmarsson, Mats; Hoegberg, Hans-Erik; Jernstedt, Karen; Norin, Torbjoern**; Acta Chemica Scandinavica, Series B: Organic Chemistry and Biochemistry; **vol.** 38; nb. 9; (1984); p. 795 - 802 View in Reaxys



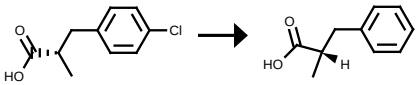
Rx-ID: 18188314 View in Reaxys

Yield	Conditions & References
	Reaction Steps: 2 1: 1.) LDA, LiCl / 1.) THF, from -78 to 23 deg C, 80 min, 2.) THF, 0 deg C, 0.2 h 2: 87 percent / 18 N H_2SO_4 / dioxane / Heating **With** 1.) LDA, LiCl, 18 N H_2SO_4 **in** dioxane **Myers, Andrew G.; Yang, Bryant H.; Chen, Hou; Gleason, James L.**; Journal of the American Chemical Society; **vol.** 116; nb. 20; (1994); p. 9361 - 9362 View in Reaxys



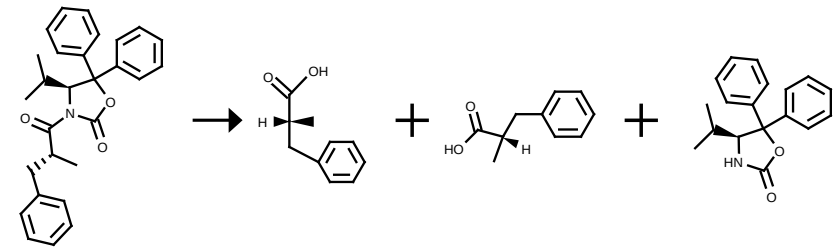
Rx-ID: 3006378 View in Reaxys

Yield	Conditions & References
95 %	**With** EDTA, phosphate buffer, Time= 12h, enoat-reductase **Simon, Helmut; Guenther, Helmut; Bader, Johann; Tischer, Wilhelm**; Angewandte Chemie; **vol.** 93; nb. 10; (1981); p. 897 - 898 View in Reaxys



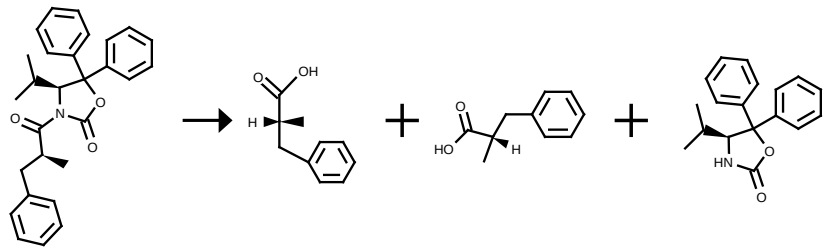
Rx-ID: 4807950 View in Reaxys

Yield	Conditions & References
	With H_2, 10percent Pd/C **in** methanol, Time= 12h, Ambient temperature, Yield given **Ferorelli, S.; Loiodice, F.; Tortorella, V.; Amoroso, R.; Bettoni, G.; et al.**; Farmaco; **vol.** 52; nb. 6/7; (1997); p. 367 - 374 View in Reaxys



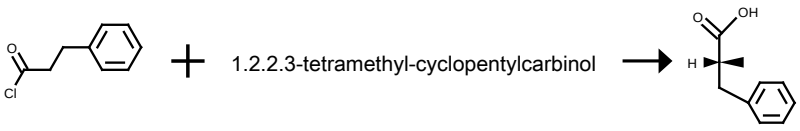
Rx-ID: 5041597 View in Reaxys

Yield	Conditions & References
94 %	**With** LiOH, Yield given **Gibson, Colin L.; Gillon, Karen; Cook, Stuart**; Tetrahedron Letters; **vol.** 39; nb. 37; (1998); p. 6733 - 6736 View in Reaxys



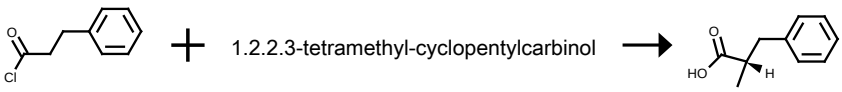
Rx-ID: 5041598 View in Reaxys

Yield	Conditions & References
95 %	**With** LiOH, Yield given **Gibson, Colin L.; Gillon, Karen; Cook, Stuart**; Tetrahedron Letters; **vol.** 39; nb. 37; (1998); p. 6733 - 6736 View in Reaxys



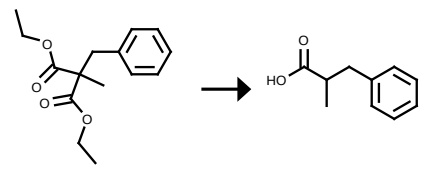
Rx-ID: 17172142 View in Reaxys

Yield	Conditions & References
	Reaction Steps: 3 1: 83 percent / Et_3N / tetrahydrofuran / 0.17 h 2: 95 percent / LiCl, diisopropylamine, n-BuLi / tetrahydrofuran; hexane / -78 °C 3: aq. n-Bu_4NOH / 2-methyl-propan-2-ol / Heating **With** Et_3N, LiCl, diisopropylamine, n-BuLi, aq. n-Bu_4NOH **in** tetrahydrofuran, hexane, 2-methyl-propan-2-ol **Myers, Andrew G.; Yang, Bryant H.; Chen, Hou; McKinstry, Lydia; Kopecky, David J.; Gleason, James L.**; Journal of the American Chemical Society; **vol.** 119; nb. 28; (1997); p. 6496 - 6511 View in Reaxys



Rx-ID: 17172143 View in Reaxys

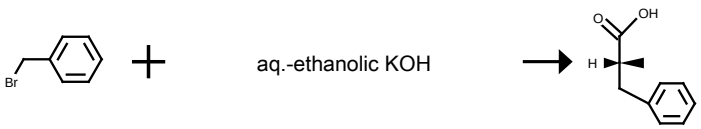
Yield	Conditions & References
	Reaction Steps: 3 1: 83 percent / Et_3N / tetrahydrofuran / 0.17 h 2: 95 percent / LiCl, diisopropylamine, n-BuLi / tetrahydrofuran; hexane / -78 °C 3: aq. n-Bu_4NOH / 2-methyl-propan-2-ol / Heating **With** Et_3N, LiCl, diisopropylamine, n-BuLi, aq. n-Bu_4NOH **in** tetrahydrofuran, hexane, 2-methyl-propan-2-ol **Myers, Andrew G.; Yang, Bryant H.; Chen, Hou; McKinstry, Lydia; Kopecky, David J.; Gleason, James L.**; Journal of the American Chemical Society; **vol.** 119; nb. 28; (1997); p. 6496 - 6511 View in Reaxys



Rx-ID: 17763424 View in Reaxys

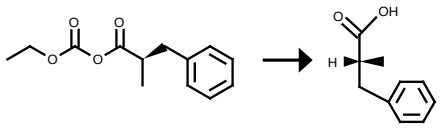
Yield	Conditions & References
	Reaction Steps: 2

	1: aq. KOH / 1 h / Heating 2: conc. H_2SO_4 / 1 h / Heating **With** aq. KOH, conc. H_2SO_4 **Tyrrell, Elizabeth; Tsang, Michael W. H.; Skinner, George A.; Fawcett, John**; Tetrahedron; **vol.** 52; nb. 29; (1996); p. 9841 - 9852 View in Reaxys
	Reaction Steps: 2 1: aq. KOH / ethanol / 24 h / Heating 2: dimethylformamide / 4 h / 100 - 110 °C **With** aq. KOH **in** ethanol, dimethylformamide **Colombo, M.; Amici, M. De; Micheli, C. De; Pitre, D.; Carrea, G.; Riva, S.**; Tetrahedron: Asymmetry; **vol.** 2; nb. 10; (1991); p. 1021 - 1030 View in Reaxys
	Reaction Steps: 2 1: concentrated aqueous KOH-solution **With** concentrated aqueous KOH-solution **Conrad; Bischoff**; Justus Liebigs Annalen der Chemie; **vol.** 204; (1880); p. 178 View in Reaxys



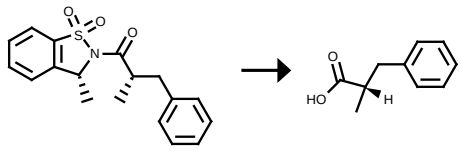
Rx-ID: 19455142 View in Reaxys

Yield	Conditions & References
	Reaction Steps: 3 1: 1.) $LiN(i\text{-}C_3H_7)2$ / 1.) THF, -78 deg C, 2.) 0 deg C, 4 h 2: 93 percent / $PhCH_2OH$ / tetrahydrofuran / 1 h / 0 °C 3: hydrogen **With** 1.) $LiN(i\text{-}C_3H_7)2$, $PhCH_2OH$, hydrogen **in** tetrahydrofuran **Evans, D. A.; Ennis, M. D.; Mathre, D. J.**; Journal of the American Chemical Society; **vol.** 104; nb. 6; (1982); p. 1737 - 1739 View in Reaxys



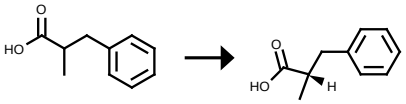
Rx-ID: 19468132 View in Reaxys

Yield	Conditions & References
	Reaction Steps: 3 2: 93 percent / $PhCH_2OH$ / tetrahydrofuran / 1 h / 0 °C 3: hydrogen **With** $PhCH_2OH$, hydrogen **in** tetrahydrofuran **Evans, D. A.; Ennis, M. D.; Mathre, D. J.**; Journal of the American Chemical Society; **vol.** 104; nb. 6; (1982); p. 1737 - 1739 View in Reaxys



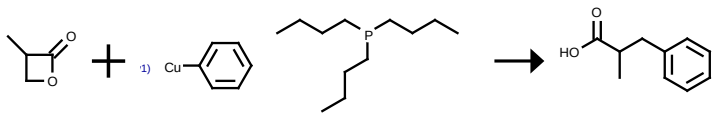
Rx-ID: 19572904 View in Reaxys

Yield	Conditions & References
	Reaction Steps: 2 1: 86 percent / Ti(i-PrO)4, molecular sieves / 3 h / 150 °C 2: 89 percent / H_2O / <RhCl(PPh_3)3> / ethanol / 5 h / Heating **With** Ti(i-PrO)4, molecular sieves, H_2O, <RhCl(PPh_3)3> **in** ethanol **Oppolzer, Wolfgang; Lienard, Philippe**; Helvetica Chimica Acta; **vol.** 75; nb. 8; (1992); p. 2572 - 2582 View in Reaxys



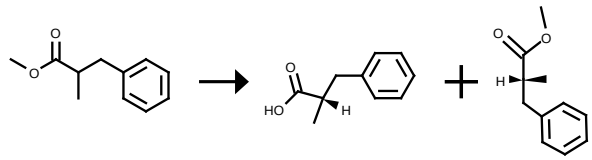
Rx-ID: 438148 View in Reaxys

Yield	Conditions & References
	With l-menthylamine **Pickard; Yates**; Journal of the Chemical Society; **vol.** 95; (1909); p. 1018 View in Reaxys
	With quinine **Kipping; Hunter**; Journal of the Chemical Society; **vol.** 83; (1903); p. 1007 View in Reaxys
	Cram,D.J.; Wingrove,A.S.; Journal of the American Chemical Society; **vol.** 86; (1964); p. 5490 - 5496 View in Reaxys **Watson,M.B.; Youngson,G.W.**; Journal of the Chemical Society [Section] C: Organic; (1968); p. 258 - 262 View in Reaxys
	Reaction Steps: 2 1: HCl / 24 h / Ambient temperature 2: water / 2 h / lipase PS **With** HCl, water **Colombo, M.; Amici, M. De; Micheli, C. De; Pitre, D.; Carrea, G.; Riva, S.**; Tetrahedron: Asymmetry; **vol.** 2; nb. 10; (1991); p. 1021 - 1030 View in Reaxys



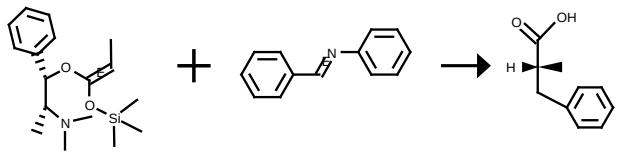
Rx-ID: 1522269 View in Reaxys

Yield	Conditions & References
67 %	**in** diethyl ether, Time= 1.5h, T= -78 °C **Kawashima, Masatoshi; Sato, Toshio; Fujisawa, Tamotsu**; Tetrahedron; **vol.** 45; nb. 2; (1989); p. 403 - 412 View in Reaxys



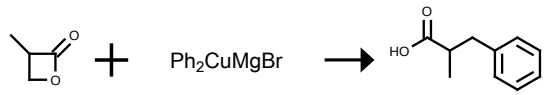
Rx-ID: 2042020 View in Reaxys

Yield	Conditions & References
44 %, 50 %	**With** lipase from Pseudomonas sp. (Amano), Time= 3h, Ambient temperature, 0.1 phosphate buffer, pH 7.0 **Delnick, Deborah L.; Margolin, Alexey L.**; Tetrahedron Letters; **vol.** 31; nb. 47; (1990); p. 6797 - 6798 View in Reaxys
50 %, 44 %	**With** lipase from Pseudomonas sp. (Amano), Time= 3h, Ambient temperature, 0.1 phosphate buffer, pH 7.0 **Delnick, Deborah L.; Margolin, Alexey L.**; Tetrahedron Letters; **vol.** 31; nb. 47; (1990); p. 6797 - 6798 View in Reaxys



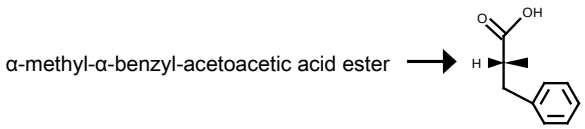
Rx-ID: 3760449 View in Reaxys

Yield	Conditions & References
	With 1) $TiCl_4$, 2) H_2, 2) $PdCl_2$, 1) CH_2Cl_2, -78 deg C, 2 h, then -40 deg C, 2 h, 2) CH_3COOH, Multistep reaction **Gennari, Cesare; Venturini, Isabella; Gislon, Gabriele; Schimperna, Giuliana**; Tetrahedron Letters; **vol.** 28; nb. 2; (1987); p. 227 - 230 View in Reaxys
	With 1.) $TiCl_4$; 2.) H_2, 2.) $PdCl_2$, 1.) CH_2Cl_2, -78 - -40 deg C, 3 h; 2.) AcOH, 5 d, Yield given. Multistep reaction **Gennari, Cesare; Schimperna, Giuliana; Venturini, Isabella**; Tetrahedron; **vol.** 44; nb. 13; (1988); p. 4221 - 4232 View in Reaxys



Rx-ID: 7250401 View in Reaxys

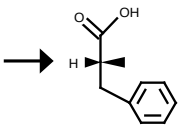
Yield	Conditions & References
52 %	**in** tetrahydrofuran, various solvent(s), 1.) -30 deg C, 1 h, 2.) 0 deg C, 1 h **Fujisawa, Tamotsu; Sato, Toshio; Kawara, Tatsuo; Kawashima, Masatoshi**; Tetrahedron Letters; **vol.** 21; (1980); p. 2181 - 2184 View in Reaxys



Rx-ID: 7625856 View in Reaxys

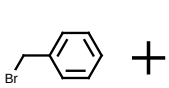
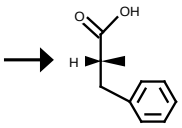
Yield	Conditions & References
	With KOH-solution

	Jones; Wallis; Journal of the American Chemical Society; **vol.** 48; (1926); p. 180 View in Reaxys

(+-)-2-methyl-3-phenyl-propionic acid 

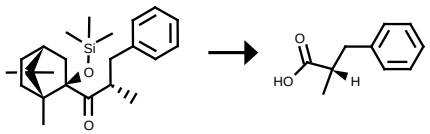
Rx-ID: 7625857 View in Reaxys

Yield	Conditions & References
	With quinine **DeTar; Weis**; Journal of the American Chemical Society; **vol.** 79; (1957); p. 3045,3048 View in Reaxys

 + polymer-bound NMe_3 $^{(1+)}$*$SCN^{(1-)}$ 

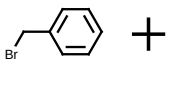
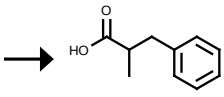
Rx-ID: 15262192 View in Reaxys

Yield	Conditions & References
	Reaction Steps: 2 1.1: $KN(SiMe_3)2$ / tetrahydrofuran; toluene / 4 h / -78 °C 1.2: 80 percent / tetrahydrofuran; toluene / -78 - 50 °C 2.1: 95 percent / CAN / acetonitrile; H_2O / 1 h / 0 °C **With** $KN(SiMe_3)2$, CAN **in** tetrahydrofuran, toluene, acetonitrile, H_2O **Palomo, Claudio; Oiarbide, Mikel; Mielgo, Antonia; Gonzalez, Alberto; Garcia, Jesus M.; Landa, Cristina; Lecumberri, Ainara; Linden, Anthony**; Organic Letters; **vol.** 3; nb. 21; (2001); p. 3249 - 3252 View in Reaxys



Rx-ID: 15284627 View in Reaxys

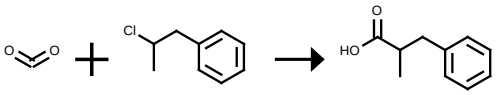
Yield	Conditions & References
	Reaction Steps: 2 1: 85 percent / TBAF / tetrahydrofuran / 0.5 h / 20 °C 2: 90 percent / CAN / acetonitrile; H_2O / 1 h / 0 °C **With** TBAF, CAN **in** tetrahydrofuran, acetonitrile, H_2O **Palomo, Claudio; Oiarbide, Mikel; Mielgo, Antonia; Gonzalez, Alberto; Garcia, Jesus M.; Landa, Cristina; Lecumberri, Ainara; Linden, Anthony**; Organic Letters; **vol.** 3; nb. 21; (2001); p. 3249 - 3252 View in Reaxys

 + polymer-bound NMe_3 $^{(1+)}$*$SCN^{(1-)}$ 

Rx-ID: 15507334 View in Reaxys

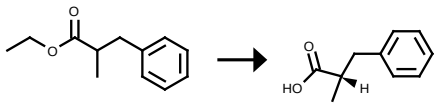
Yield	Conditions & References
	Reaction Steps: 2 1: LDA / tetrahydrofuran 2: KOH; H_2O

	With LDA, KOH, H_2O **in** tetrahydrofuran **Kane, John L.; Shea, Kevin M.; Crombie, Aimee L.; Danheiser, Rick L.**; Organic Letters; **vol.** 3; nb. 7; (2001); p. 1081 - 1084 View in Reaxys



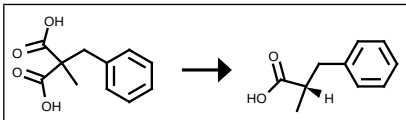
Rx-ID: 1046610 View in Reaxys

Yield	Conditions & References
	With Mg **in** diethyl ether **Urry,W.H. et al.**; Journal of Organic Chemistry; **vol.** 29; nb. 7; (1964); p. 1663 - 1669 View in Reaxys



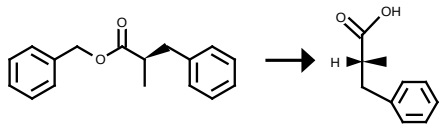
Rx-ID: 1156924 View in Reaxys

Yield	Conditions & References
	With α-chymotrypsin, aq. NaOH **Cohen,S.G.; Milovanovic,A.**; Journal of the American Chemical Society; **vol.** 90; (1968); p. 3495 - 3502 View in Reaxys



Rx-ID: 1364727 View in Reaxys

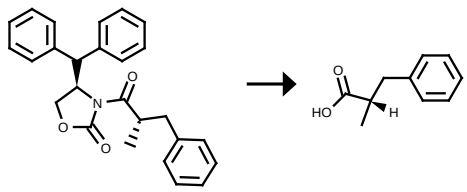
Yield	Conditions & References
	(decarboxylation) **Terashima,S. et al.**; Chemical and Pharmaceutical Bulletin; **vol.** 18; (1970); p. 1124 - 1136 View in Reaxys
	Reaction Steps: 3 1: dimethylformamide / 4 h / 100 - 110 °C 2: HCl / 24 h / Ambient temperature 3: water / 2 h / lipase PS **With** HCl, water **in** dimethylformamide **Colombo, M.; Amici, M. De; Micheli, C. De; Pitre, D.; Carrea, G.; Riva, S.**; Tetrahedron: Asymmetry; **vol.** 2; nb. 10; (1991); p. 1021 - 1030 View in Reaxys



Rx-ID: 2774511 View in Reaxys

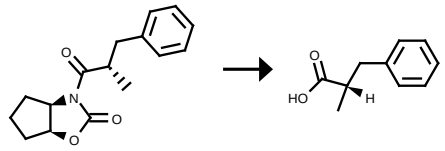
Yield	Conditions & References
	With hydrogen

	Evans, D. A.; Ennis, M. D.; Mathre, D. J.; Journal of the American Chemical Society; **vol.** 104; nb. 6; (1982); p. 1737 - 1739 View in Reaxys



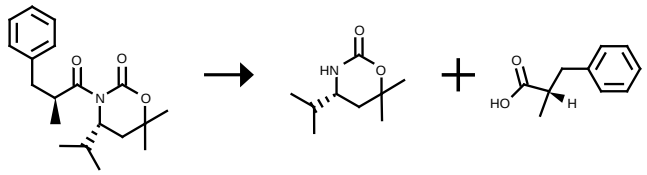
Rx-ID: 4369811 View in Reaxys

Yield	Conditions & References
	With LiO_2H **in** tetrahydrofuran, H_2O, T= 0 °C **Sibi, Mukund P.; Deshpande, Prasad K.; Ji, Jianguo**; Tetrahedron Letters; **vol.** 36; nb. 49; (1995); p. 8965 - 8968 View in Reaxys



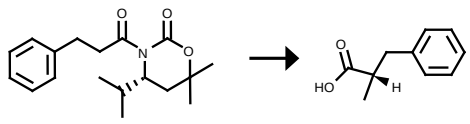
Rx-ID: 4699524 View in Reaxys

Yield	Conditions & References
	With aq. LiOH, H_2O_2 **in** tetrahydrofuran, T= 0 °C **Ghosh, Arun K.; Cho, Hanna; Onishi, Masanobu**; Tetrahedron: Asymmetry; **vol.** 8; nb. 6; (1997); p. 821 - 824 View in Reaxys



Rx-ID: 11137429 View in Reaxys

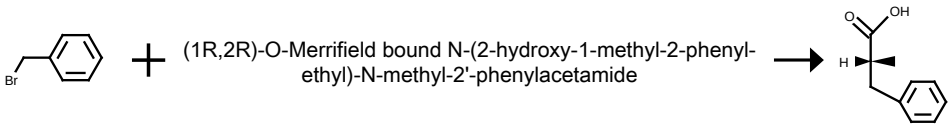
Yield	Conditions & References
11 mg, 10 mg	**With** aq. H_2O_2, LiOH **in** tetrahydrofuran, Time= 16h, T= 0 - 20 °C **Davies, Stephen G.; Garner, A. Christopher; Roberts, Paul M.; Smith, Andrew D.; Sweet, Miles J.; Thomson, James E.**; Organic and Biomolecular Chemistry; **vol.** 4; nb. 14; (2006); p. 2753 - 2768 View in Reaxys



Rx-ID: 11400860 View in Reaxys

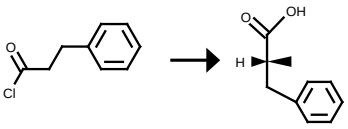
Yield	Conditions & References
	Reaction Steps: 2 1.1: KHMDS / tetrahydrofuran; toluene / 1 h / -78 °C 1.2: 38 percent / tetrahydrofuran; toluene / -78 - -40 °C 2.1: 10 mg / aq. H_2O_2; LiOH / tetrahydrofuran / 16 h / 0 - 20 °C

	With KHMDS, aq. H_2O_2, LiOH **in** tetrahydrofuran, toluene **Davies, Stephen G.; Garner, A. Christopher; Roberts, Paul M.; Smith, Andrew D.; Sweet, Miles J.; Thomson, James E.**; Organic and Biomolecular Chemistry; **vol.** 4; nb. 14; (2006); p. 2753 - 1768 View in Reaxys



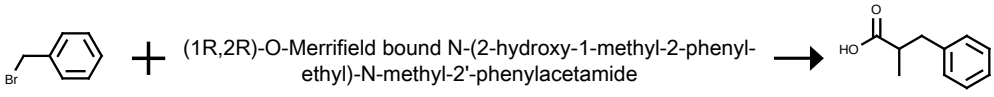
Rx-ID: 11423706 View in Reaxys

Yield	Conditions & References
	Reaction Steps: 2 1.1: KHMDS / tetrahydrofuran; toluene / 1 h / -78 °C 1.2: 78 percent / 5 h / -40 °C 2.1: 100 percent / aq. H_2O_2; LiOH / tetrahydrofuran / 16 h / 0 - 20 °C **With** KHMDS, aq. H_2O_2, LiOH **in** tetrahydrofuran, toluene **Davies, Stephen G.; Garner, A. Christopher; Roberts, Paul M.; Smith, Andrew D.; Sweet, Miles J.; Thomson, James E.**; Organic and Biomolecular Chemistry; **vol.** 4; nb. 14; (2006); p. 2753 - 1768 View in Reaxys



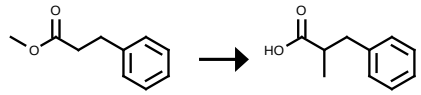
Rx-ID: 11786208 View in Reaxys

Yield	Conditions & References
	Reaction Steps: 3 1.1: nBuLi / tetrahydrofuran / -78 °C 1.2: 83 percent / tetrahydrofuran / -78 °C 2.1: LDA / tetrahydrofuran / -78 °C 2.2: 63 percent / tetrahydrofuran / -78 - 20 °C 3.1: 77 percent / aq. LiOH / tetrahydrofuran / 0 - 20 °C **With** nBuLi, LDA, aq. LiOH **in** tetrahydrofuran **Suzuki, Takayoshi; Hisakawa, Shinya; Itoh, Yukihiro; Maruyama, Sakiko; Kurotaki, Mineko; Nakagawa, Hidehiko; Miyata, Naoki**; Bioorganic & Medicinal Chemistry Letters; **vol.** 17; nb. 6; (2007); p. 1558 - 1561 View in Reaxys
	Reaction Steps: 4 1: 82 percent / Et_3N / tetrahydrofuran / 1 h / 0 °C 2: 83 percent / Mg / diethyl ether / reflux, 4 h -> ambient temperature 3: LDA / tetrahydrofuran / -100 deg C, 2 h -> -50 deg C 4: 3 M aq. HCl / dioxane / 42 h / 90 - 95 °C **With** Et_3N, Mg, LDA, 3 M aq. HCl **in** tetrahydrofuran, diethyl ether, dioxane **Guoqiang, Lin; Hjalmarsson, Mats; Hoegberg, Hans-Erik; Jernstedt, Karen; Norin, Torbjoern**; Acta Chemica Scandinavica, Series B: Organic Chemistry and Biochemistry; **vol.** 38; nb. 9; (1984); p. 795 - 802 View in Reaxys



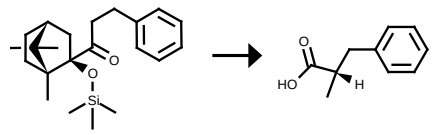
Rx-ID: 13176314 View in Reaxys

Yield	Conditions & References
	Reaction Steps: 2 1: LDA / tetrahydrofuran 2: aq. KOH **With** LDA, aq. KOH **in** tetrahydrofuran **Crombie, Aimee L.; Kane, John L.; Shea, Kevin M.; Danheiser, Rick L.**; Journal of Organic Chemistry; **vol.** 69; nb. 25; (2004); p. 8652 - 8667 View in Reaxys



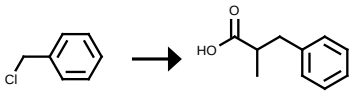
Rx-ID: 14077256 View in Reaxys

Yield	Conditions & References
	Reaction Steps: 2 1.1: diisopropylamine; n-butyllithium / tetrahydrofuran; hexane / 0.33 h / -78 °C 1.2: 47 percent / tetrahydrofuran; hexane / 0.5 h / 0 °C 2.1: 100 percent / potassium hydroxide / ethanol; H_2O / 8 h / 0 °C **With** diisopropylamine, n-butyllithium, potassium hydroxide **in** tetrahydrofuran, hexane, ethanol, H_2O **Kato, Dai-ichiro; Mitsuda, Satoshi; Ohta, Hiromichi**; Journal of Organic Chemistry; **vol.** 68; nb. 19; (2003); p. 7234 - 7242 View in Reaxys



Rx-ID: 15284474 View in Reaxys

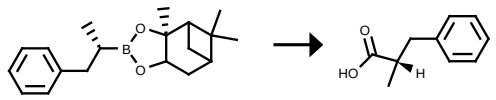
Yield	Conditions & References
	Reaction Steps: 3 1.1: LDA; DMPU / tetrahydrofuran; hexane / 4 h / -50 °C 1.2: tetrahydrofuran; hexane / 1 h / -30 °C 2.1: 85 percent / TBAF / tetrahydrofuran / 0.5 h / 20 °C 3.1: 90 percent / CAN / acetonitrile; H_2O / 1 h / 0 °C **With** LDA, DMPU, TBAF, CAN **in** tetrahydrofuran, hexane, acetonitrile, H_2O **Palomo, Claudio; Oiarbide, Mikel; Mielgo, Antonia; Gonzalez, Alberto; Garcia, Jesus M.; Landa, Cristina; Lecumberri, Ainara; Linden, Anthony**; Organic Letters; **vol.** 3; nb. 21; (2001); p. 3249 - 3252 View in Reaxys



Rx-ID: 21039728 View in Reaxys

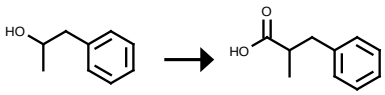
Yield	Conditions & References
	Reaction Steps: 3 1: 1.) NaH / 1.) ethyl ether, reflux, 2.) ethyl ether, RT, 6 h 2: aq. KOH / ethanol / 24 h / Heating 3: dimethylformamide / 4 h / 100 - 110 °C **With** 1.) NaH, aq. KOH **in** ethanol, dimethylformamide **Colombo, M.; Amici, M. De; Micheli, C. De; Pitre, D.; Carrea, G.; Riva, S.**; Tetrahedron: Asymmetry; **vol.** 2; nb. 10; (1991); p. 1021 - 1030

	View in Reaxys
	Reaction Steps: 3 2: concentrated aqueous KOH-solution **With** concentrated aqueous KOH-solution **Conrad; Bischoff**; Justus Liebigs Annalen der Chemie; **vol.** 204; (1880); p. 178 View in Reaxys



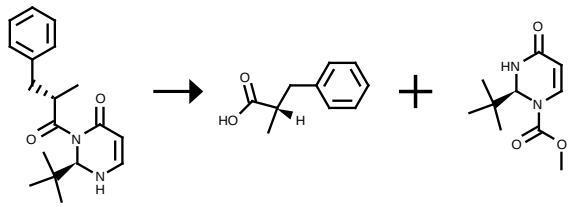
Rx-ID: 21089128 View in Reaxys

Yield	Conditions & References
	Reaction Steps: 2 2: 90 percent / chromic acid, water / diethyl ether / 2 h / T <25 deg C **With** chromic acid, water **in** diethyl ether **Rangaishenvi, Milind V.; Singaram, Bakthan; Brown, Herbert C.**; Journal of Organic Chemistry; **vol.** 56; nb. 10; (1991); p. 3286 - 3294 View in Reaxys



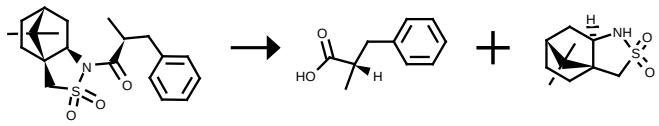
Rx-ID: 22518041 View in Reaxys

Yield	Conditions & References
	Reaction Steps: 2 1: $SOCl_2$ 2: Mg / diethyl ether **With** $SOCl_2$, Mg **in** diethyl ether **Urry,W.H. et al.**; Journal of Organic Chemistry; **vol.** 29; nb. 7; (1964); p. 1663 - 1669 View in Reaxys



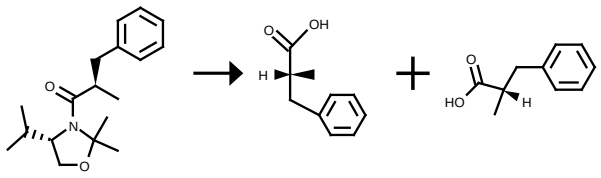
Rx-ID: 2510307 View in Reaxys

Yield	Conditions & References
	With 1.) 30percent aq. H_2O_2, aq. LiOH, 2.) methyl chloroformate, 1.) THF, 30 min, 2.) THF, RT, 4 h, Yield given. Multistep reaction. Yields of byproduct given **Chu, Kent S.; Negrete, George R.; Konopelski, Joseph P.; Lakner, Frederick J.; Woo, Nam-Tae; Olmstead, Marilyn M.**; Journal of the American Chemical Society; **vol.** 114; nb. 5; (1992); p. 1800 - 1812 View in Reaxys



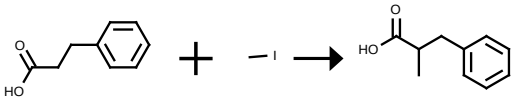
Rx-ID: 2691104 View in Reaxys

Yield	Conditions & References
	With H_2O_2 (30percent), LiOH*H_2O **in** tetrahydrofuran, H_2O, 1.) 0 deg C, 1 h; 2.) room temp., 16 h **Oppolzer, Wolfgang; Moretti, Robert; Thomi, Silvia**; Tetrahedron Letters; **vol.** 30; nb. 41; (1989); p. 5603 - 5606 View in Reaxys



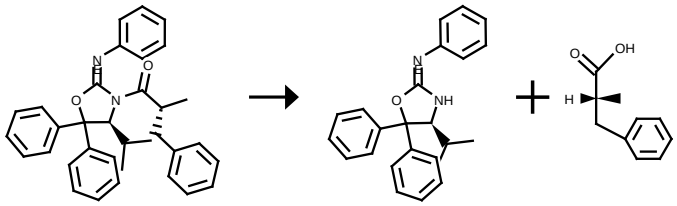
Rx-ID: 4289289 View in Reaxys

Yield	Conditions & References
	With 6 N sulfuric acid **in** acetic acid, Time= 4h, Heating, Yield given. Yields of byproduct given. Title compound not separated from byproducts **Kanemasa, Shuji; Ueno, Koichi; Onimura, Kenjiro; Kikukawa, Takashi; Yamamoto, Hidetoshi**; Tetrahedron; **vol.** 51; nb. 38; (1995); p. 10453 - 10462 View in Reaxys



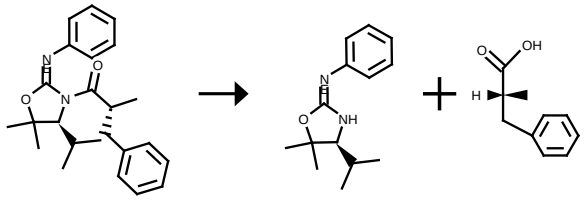
Rx-ID: 11048898 View in Reaxys

Yield	Conditions & References
	With LDA **in** tetrahydrofuran, T= -78 °C **Zhang, Minsheng; Porte, Alex; Diamantidis, George; Sogi, Kimberly; Kubrak, Dennis; Resnick, Lynn; Mayer, Scott C.; Wang, Zheng; Kreft, Anthony F.; Harrison, Boyd L.**; Bioorganic and Medicinal Chemistry Letters; **vol.** 17; nb. 9; (2007); p. 2401 - 2403 View in Reaxys



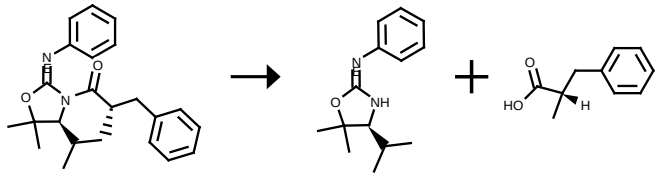
Rx-ID: 11198115 View in Reaxys

Yield	Conditions & References
	With aq. NaOH **in** dioxane, Time= 1h, Heating **Le, Thanh Nguyen; Nguyen, Quynh Pham Bao; Kim, Jae Nyoung; Kim, Taek Hyeon**; Tetrahedron Letters; **vol.** 48; nb. 44; (2007); p. 7834 - 7837 View in Reaxys



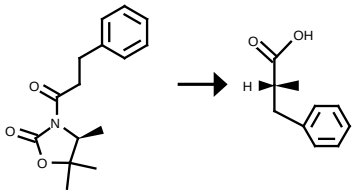
Rx-ID: 11198117 View in Reaxys

Yield	Conditions & References
	With aq. NaOH **in** dioxane, Time= 1h, Heating **Le, Thanh Nguyen; Nguyen, Quynh Pham Bao; Kim, Jae Nyoung; Kim, Taek Hyeon**; Tetrahedron Letters; **vol.** 48; nb. 44; (2007); p. 7834 - 7837 View in Reaxys



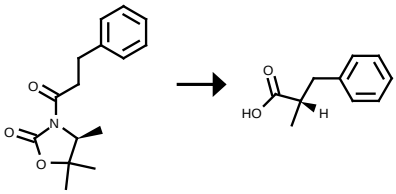
Rx-ID: 11198119 View in Reaxys

Yield	Conditions & References
	With aq. NaOH **in** dioxane, Time= 1h, Heating **Le, Thanh Nguyen; Nguyen, Quynh Pham Bao; Kim, Jae Nyoung; Kim, Taek Hyeon**; Tetrahedron Letters; **vol.** 48; nb. 44; (2007); p. 7834 - 7837 View in Reaxys



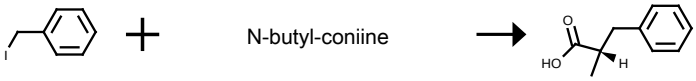
Rx-ID: 11785689 View in Reaxys

Yield	Conditions & References
	Reaction Steps: 2 1.1: LDA / tetrahydrofuran / -78 °C 1.2: 63 percent / tetrahydrofuran / -78 - 20 °C 2.1: 77 percent / aq. LiOH / tetrahydrofuran / 0 - 20 °C **With** LDA, aq. LiOH **in** tetrahydrofuran **Suzuki, Takayoshi; Hisakawa, Shinya; Itoh, Yukihiro; Maruyama, Sakiko; Kurotaki, Mineko; Nakagawa, Hidehiko; Miyata, Naoki**; Bioorganic & Medicinal Chemistry Letters; **vol.** 17; nb. 6; (2007); p. 1558 - 1561 View in Reaxys



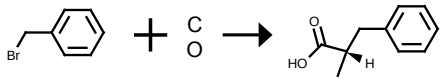
Rx-ID: 11785690 View in Reaxys

Yield	Conditions & References
	Reaction Steps: 2 1.1: LDA / tetrahydrofuran / -78 °C 1.2: 63 percent / tetrahydrofuran / -78 - 20 °C 2.1: 78 percent / aq. LiOH / tetrahydrofuran / 0 - 20 °C **With** LDA, aq. LiOH **in** tetrahydrofuran **Suzuki, Takayoshi; Hisakawa, Shinya; Itoh, Yukihiro; Maruyama, Sakiko; Kurotaki, Mineko; Nakagawa, Hidehiko; Miyata, Naoki**; Bioorganic & Medicinal Chemistry Letters; **vol.** 17; nb. 6; (2007); p. 1558 - 1561 View in Reaxys



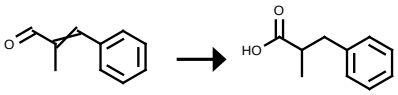
Rx-ID: 15266847 View in Reaxys

Yield	Conditions & References
	Reaction Steps: 4 1.1: LDA / tetrahydrofuran; hexane / 2 h / -78 °C 1.2: 80 percent / tetrahydrofuran; hexane / 1.5 h / -30 °C 2.1: LDA; DMPU / tetrahydrofuran; hexane / 4 h / -50 °C 2.2: tetrahydrofuran; hexane / 1 h / -30 °C 3.1: 85 percent / TBAF / tetrahydrofuran / 0.5 h / 20 °C 4.1: 90 percent / CAN / acetonitrile; H_2O / 1 h / 0 °C **With** LDA, DMPU, TBAF, CAN **in** tetrahydrofuran, hexane, acetonitrile, H_2O **Palomo, Claudio; Oiarbide, Mikel; Mielgo, Antonia; Gonzalez, Alberto; Garcia, Jesus M.; Landa, Cristina; Lecumberri, Ainara; Linden, Anthony**; Organic Letters; **vol.** 3; nb. 21; (2001); p. 3249 - 3252 View in Reaxys



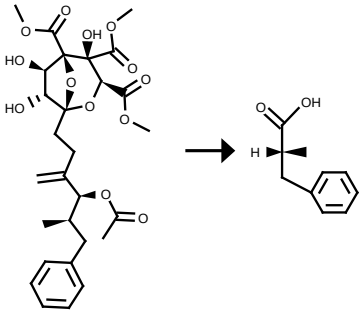
Rx-ID: 17971757 View in Reaxys

Yield	Conditions & References
	Reaction Steps: 2 1: 81 percent / NaHMDS / tetrahydrofuran / -78 to 0 deg C 2: LiO_2H / tetrahydrofuran; H_2O / 0 °C **With** NaHMDS, LiO_2H **in** tetrahydrofuran, H_2O **Sibi, Mukund P.; Deshpande, Prasad K.; Ji, Jianguo**; Tetrahedron Letters; **vol.** 36; nb. 49; (1995); p. 8965 - 8968 View in Reaxys



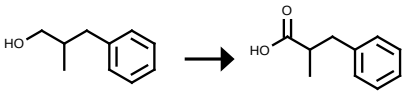
Rx-ID: 18527359 View in Reaxys

Yield	Conditions & References
	Reaction Steps: 2 1: 96 percent / NaOAc, PPh_3, H_2, $RhCl(PPh_3)$ / benzene / 24 h / 110 °C / 103430 Torr 2: 80 percent / $KMnO_4$ **With** NaOAc, PPh_3, H_2, $RhCl(PPh_3)$, $KMnO_4$ **in** benzene **Nalesnik, Theodore E.; Freudenberger, John H.; Orchin, Milton**; Journal of Organometallic Chemistry; **vol.** 221; nb. 2; (1981); p. 193 - 198 View in Reaxys



Rx-ID: 19581836 View in Reaxys

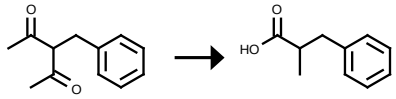
Yield	Conditions & References
	Reaction Steps: 3 1: 89 percent / 4-(N,N-dimethylamino)pyridine / pyridine-d5 / 0.05 h / 80 °C 2: 89 percent / 3percent methanolic HCl / 16 h / Ambient temperature **With** 4-(N,N-dimethylamino)pyridine, 3percent methanolic HCl **in** pyridine-d5 **Wilson, Kenneth E.; Burk, Robert M.; Biftu, Tesfaye; Ball, Richard G.; Hoogsteen, Karst**; Journal of Organic Chemistry; **vol.** 57; nb. 28; (1992); p. 7151 - 7158 View in Reaxys



Rx-ID: 317273 View in Reaxys

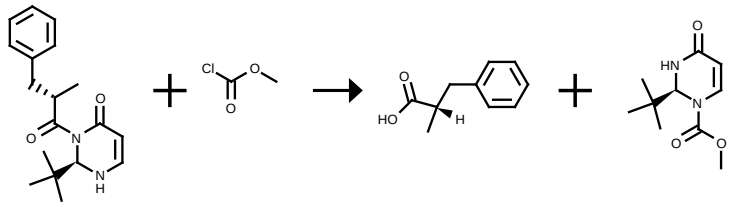
Yield	Conditions & References
	With chromic acid, acetic acid **Guerbet**; Bulletin de la Societe Chimique de France; **vol.** <4> 3; (1908); p. 945; Chem. Zentralbl.; **vol.** 79; nb. II; (1908); p. 866 View in Reaxys **Guerbet**; Comptes Rendus Hebdomadaires des Seances de l'Academie des Sciences; **vol.** 146; (1908); p. 1406; Bulletin de la Societe Chimique de France; **vol.** <4> 3; (1908); p. 944; Chem. Zentralbl.; **vol.** 79; nb. II; (1908); p. 866 View in Reaxys
	With potash, T= 230 °C , im geschlossenen Rohr **Guerbet**; Bulletin de la Societe Chimique de France; **vol.** <4> 3; (1908); p. 945; Chem. Zentralbl.; **vol.** 79; nb. II; (1908); p. 866 View in Reaxys **Guerbet**; Comptes Rendus Hebdomadaires des Seances de l'Academie des Sciences; **vol.** 146; (1908); p. 1406; Bulletin de la Societe Chimique de France; **vol.** <4> 3; (1908); p. 944; Chem. Zentralbl.; **vol.** 79; nb. II; (1908); p. 866 View in Reaxys
	bei der Oxydation **Guerbet**; Comptes Rendus Hebdomadaires des Seances de l'Academie des Sciences; **vol.** 146; (1908); p. 300,1405 View in Reaxys

	Guerbet; Bulletin de la Societe Chimique de France; **vol.** <4> 3; (1908); p. 504,943; Chem. Zentralbl.; **vol.** 79; nb. II; (1908); p. 866 View in Reaxys



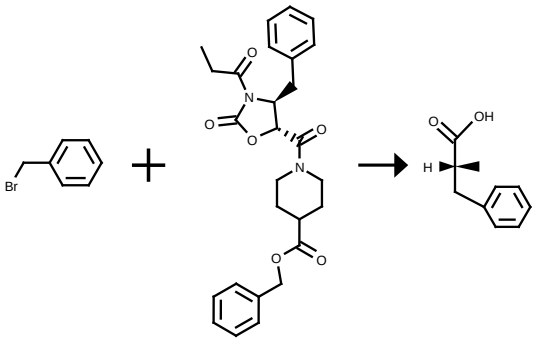
Rx-ID: 1041842 View in Reaxys

Yield	Conditions & References
	With H_2O_2, aq. NaOH **in** methanol **Cocker,W.; Grayson,D.H.**; Journal of the Chemical Society, Perkin Transactions 1: Organic and Bio-Organic Chemistry (1972-1999); (1975); p. 1347 - 1352 View in Reaxys



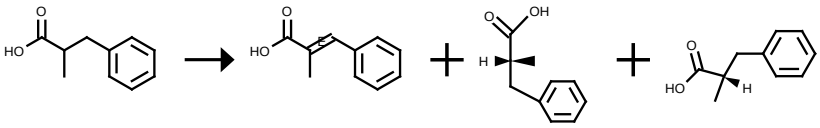
Rx-ID: 3356190 View in Reaxys

Yield	Conditions & References
	With 1.) 30percent aq. H_2O_2, aq. LiOH, 1.) THF, 30 min, 2.) THF, RT, 4 h, Yield given. Multistep reaction. Yields of byproduct given **Chu, Kent S.; Negrete, George R.; Konopelski, Joseph P.; Lakner, Frederick J.; Woo, Nam-Tae; Olmstead, Marilyn M.**; Journal of the American Chemical Society; **vol.** 114; nb. 5; (1992); p. 1800 - 1812 View in Reaxys



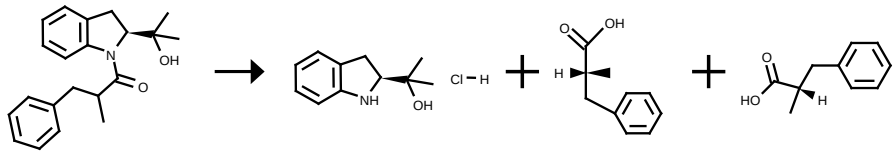
Rx-ID: 9658934 View in Reaxys

Yield	Conditions & References
	Stage 1: With LDA **in** tetrahydrofuran, T= -78 - 0 °C **Stage 2: With** LiOH, aq. H_2O_2 **in** tetrahydrofuran, T= 0 °C , Further stages. **Kotake, Tomoya; Rajesh, S.; Hayashi, Yoshio; Mukai, Yoshie; Ueda, Mitsuhiro; Kimura, Tooru; Kiso, Yoshiaki**; Tetrahedron Letters; **vol.** 45; nb. 18; (2004); p. 3651 - 3654 View in Reaxys



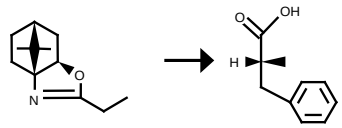
Rx-ID: 10036551 View in Reaxys

Yield	Conditions & References
	With Nocardia diaphanozonaria JCM 3208 whole cells, phosphate buffer, 2-bromohexanoic acid **in** H_2O, T= 30 °C , pH= 7.0, Title compound not separated from byproducts **Kato, Dai-ichiro; Miyamoto, Kenji; Ohta, Hiromichi**; Tetrahedron: Asymmetry; **vol.** 15; nb. 18; (2004); p. 2965 - 2974 View in Reaxys



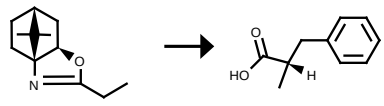
Rx-ID: 10467878 View in Reaxys

Yield	Conditions & References
	With aq. HCl **in** dioxane **Andersson, Fredrik; Hedenstroem, Erik**; Tetrahedron: Asymmetry; **vol.** 17; nb. 13; (2006); p. 1952 - 1957 View in Reaxys



Rx-ID: 15735867 View in Reaxys

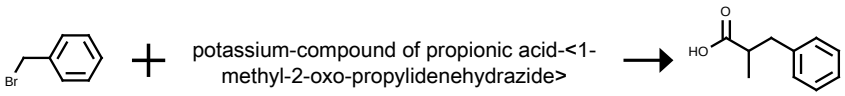
Yield	Conditions & References
	Reaction Steps: 3 1.1: LDA / tetrahydrofuran / -78 °C 1.2: 95 percent / tetrahydrofuran 2.1: 24 h / Heating 3.1: KOH; MeOH / Heating **With** LDA, KOH, MeOH **in** tetrahydrofuran, 1.1: Metallation / 1.2: Alkylation / 2.1: Ring cleavage / 3.1: Hydrolysis **Chandrasekhar, Sosale; Kausar, Amina**; Tetrahedron: Asymmetry; **vol.** 11; nb. 11; (2000); p. 2249 - 2254 View in Reaxys



Rx-ID: 15735868 View in Reaxys

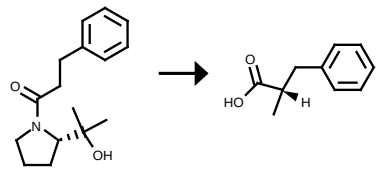
Yield	Conditions & References
	Reaction Steps: 3 1.1: LDA / tetrahydrofuran / -78 °C 1.2: 95 percent / tetrahydrofuran 2.1: 24 h / Heating 3.1: KOH; MeOH / Heating **With** LDA, KOH, MeOH **in** tetrahydrofuran, 1.1: Metallation / 1.2: Alkylation / 2.1: Ring cleavage / 3.1: Hydrolysis

	Chandrasekhar, Sosale; Kausar, Amina; Tetrahedron: Asymmetry; **vol.** 11; nb. 11; (2000); p. 2249 - 2254 View in Reaxys



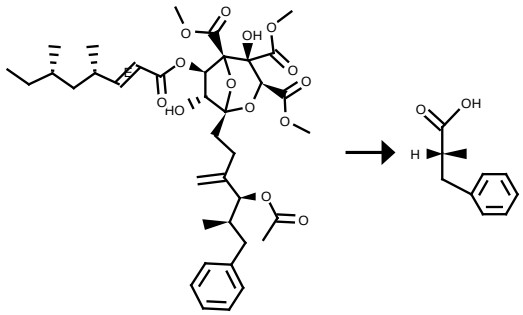
Rx-ID: 17508389 View in Reaxys

Yield	Conditions & References
	Reaction Steps: 2 1: 80 percent / LDA / tetrahydrofuran / 1.) 0 deg C, 45 min, 2.) r.t., 1 h 2: 5 percent / manganese(III) acetate / 22 h / 60 °C **With** LDA, manganese(III) acetate **in** tetrahydrofuran **Jamie, Joanne F.; Rickards, Rodney W.**; Journal of the Chemical Society, Perkin Transactions 1: Organic and Bio-Organic Chemistry (1972-1999); nb. 21; (1996); p. 2603 - 2614 View in Reaxys
	Reaction Steps: 2 1: 80 percent / LDA / tetrahydrofuran / 1.) 0 deg C, 45 min, 2.) r.t., 1 h 2: 5 percent / manganese(III) acetate, acetic acid / 22 h / 60 °C **With** LDA, manganese(III) acetate, acetic acid **in** tetrahydrofuran **Jamie, Joanne F.; Rickards, Rodney W.**; Journal of the Chemical Society, Perkin Transactions 1: Organic and Bio-Organic Chemistry (1972-1999); nb. 21; (1996); p. 2603 - 2614 View in Reaxys



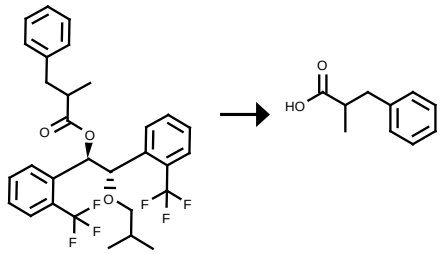
Rx-ID: 19210597 View in Reaxys

Yield	Conditions & References
	Reaction Steps: 2 1: LDA / tetrahydrofuran / -100 deg C, 2 h -> -50 deg C 2: 3 M aq. HCl / dioxane / 42 h / 90 - 95 °C **With** LDA, 3 M aq. HCl **in** tetrahydrofuran, dioxane **Guoqiang, Lin; Hjalmarsson, Mats; Hoegberg, Hans-Erik; Jernstedt, Karen; Norin, Torbjoern**; Acta Chemica Scandinavica, Series B: Organic Chemistry and Biochemistry; **vol.** 38; nb. 9; (1984); p. 795 - 802 View in Reaxys
	Reaction Steps: 2 1: LDA / tetrahydrofuran / -100 deg C, 2 h -> -50 deg C 2: 76 percent / 3 M aq. HCl / dioxane / 42 h / 90 - 95 °C **With** LDA, 3 M aq. HCl **in** tetrahydrofuran, dioxane **Guoqiang, Lin; Hjalmarsson, Mats; Hoegberg, Hans-Erik; Jernstedt, Karen; Norin, Torbjoern**; Acta Chemica Scandinavica, Series B: Organic Chemistry and Biochemistry; **vol.** 38; nb. 9; (1984); p. 795 - 802 View in Reaxys



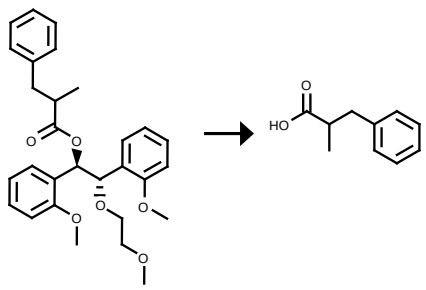
Rx-ID: 19576306 View in Reaxys

Yield	Conditions & References
	Reaction Steps: 4 1: 68 percent / 0.2percent K_2CO_3 / methanol / 1.33 h / 30 °C 2: 89 percent / 4-(N,N-dimethylamino)pyridine / pyridine-d5 / 0.05 h / 80 °C 3: 89 percent / 3percent methanolic HCl / 16 h / Ambient temperature **With** 0.2percent K_2CO_3, 4-(N,N-dimethylamino)pyridine, 3percent methanolic HCl **in** methanol, pyridine-d5 **Wilson, Kenneth E.; Burk, Robert M.; Biftu, Tesfaye; Ball, Richard G.; Hoogsteen, Karst**; Journal of Organic Chemistry; **vol.** 57; nb. 28; (1992); p. 7151 - 7158 View in Reaxys



Rx-ID: 28576586 View in Reaxys

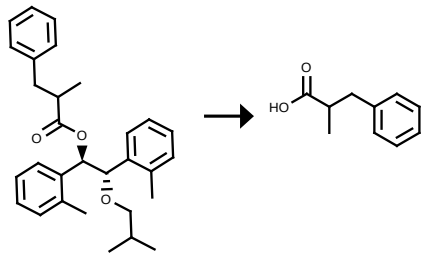
Yield	Conditions & References
	Stage 1: With lithium hydroxide monohydrate, water **in** tetrahydrofuran, methanol, Time= 12h, T= 20 °C **Stage 2: With** water, sodium hydrogencarbonate **Stage 3: With** hydrogen chloride **in** water **Broeker, Joachim; Knollmueller, Max; Gaertner, Peter**; Tetrahedron: Asymmetry; **vol.** 20; nb. 3; (2009); p. 273 - 287 View in Reaxys



Rx-ID: 28576587 View in Reaxys

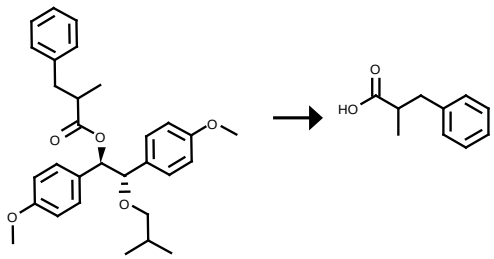
Yield	Conditions & References
	Stage 1: With lithium hydroxide monohydrate, water **in** tetrahydrofuran, methanol, Time= 12h, T= 20 °C **Stage 2: With** water, sodium hydrogencarbonate

	Stage 3: With hydrogen chloride **in** water **Broeker, Joachim; Knollmueller, Max; Gaertner, Peter**; Tetrahedron: Asymmetry; **vol.** 20; nb. 3; (2009); p. 273 - 287 View in Reaxys



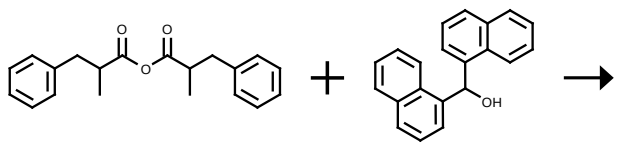
Rx-ID: 28576624 View in Reaxys

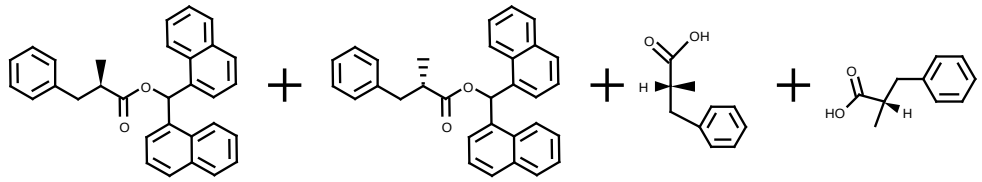
Yield	Conditions & References
	Stage 1: With lithium hydroxide monohydrate, water **in** tetrahydrofuran, methanol, Time= 12h, T= 20 °C **Stage 2: With** water, sodium hydrogencarbonate **Stage 3: With** hydrogen chloride **in** water **Broeker, Joachim; Knollmueller, Max; Gaertner, Peter**; Tetrahedron: Asymmetry; **vol.** 20; nb. 3; (2009); p. 273 - 287 View in Reaxys



Rx-ID: 28576625 View in Reaxys

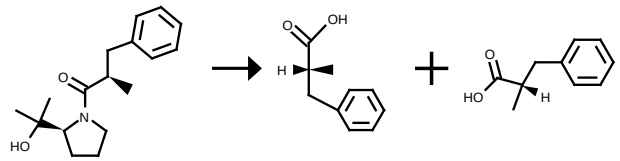
Yield	Conditions & References
	Stage 1: With lithium hydroxide monohydrate, water **in** tetrahydrofuran, methanol, Time= 12h, T= 20 °C **Stage 2: With** water, sodium hydrogencarbonate **Stage 3: With** hydrogen chloride **in** water **Broeker, Joachim; Knollmueller, Max; Gaertner, Peter**; Tetrahedron: Asymmetry; **vol.** 20; nb. 3; (2009); p. 273 - 287 View in Reaxys





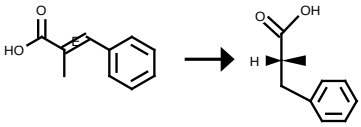
Rx-ID: 28960998 View in Reaxys

Yield	Conditions & References
	With S-HBTM, N-ethyl-N,N-diisopropylamine **in** toluene, Time= 24h, T= 0 °C , optical yield given as percent ee, enantioselective reaction **Yang, Xing; Birman, Vladimir B.**; Advanced Synthesis and Catalysis; **vol.** 351; nb. 14-15; (2009); p. 2301 - 2304 View in Reaxys



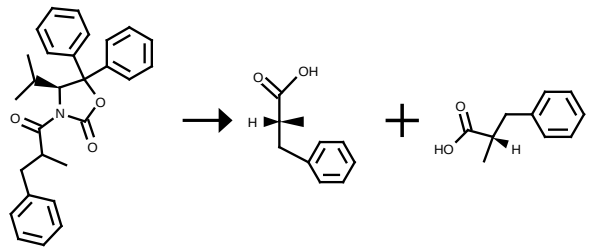
Rx-ID: 3499086 View in Reaxys

Yield	Conditions & References
	With 3 M aq. HCl **in** dioxane, Time= 42h, T= 90 - 95 °C , Yield given. Yields of byproduct given. Title compound not separated from byproducts **Guoqiang, Lin; Hjalmarsson, Mats; Hoegberg, Hans-Erik; Jernstedt, Karen; Norin, Torbjoern**; Acta Chemica Scandinavica, Series B: Organic Chemistry and Biochemistry; **vol.** 38; nb. 9; (1984); p. 795 - 802 View in Reaxys



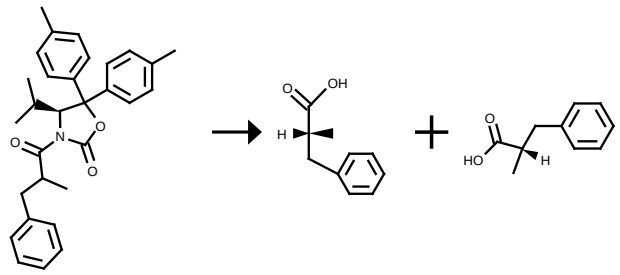
Rx-ID: 3962087 View in Reaxys

Yield	Conditions & References
61 % Spectr.	**With** H_2, (S,S)-<(P-N)RhNBD>ClO_4 **in** ethanol, Time= 3.5h, T= 30 °C , study of the asymmetric hydrogenation of various prochiral substrates with chiral ligands containing rhodium(I) complexes of ferrocenylphosphonium as asymmetric catalysts, Product distribution **Appelton, Trevor D.; Cullen, William R.; Evans, Sthephen; Kim, Tae-Jeong; Trotter, James**; Journal of Organometallic Chemistry; **vol.** 279; (1985); p. 5 - 22 View in Reaxys
41 %Chromat.	Example Name D20 **With** hydrogen, 1-(1-dimethylaminoethyl)-2-isopropylthio-3-diphenylphosphino-ferrocene, bis(bicyclo[2.2.1]hepta-2,5-diene)rhodium(I) tetrafluoroborate **in** methanol, Time= 21h, T= 25 °C , p= 750.075Torr , Product distribution / selectivity **Patent**; **SOLVIAS AG**; WO2006/117369; (2006); (A1) German View in Reaxys



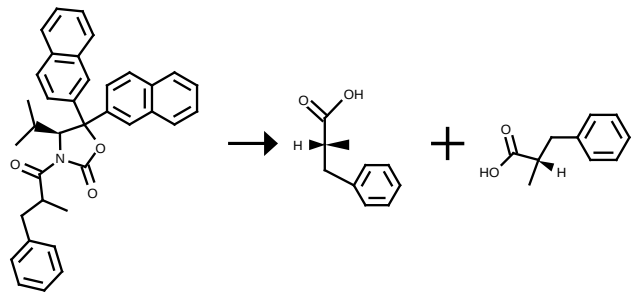
Rx-ID: 8848295 View in Reaxys

Yield	Conditions & References
	With aq. LiOH **in** tetrahydrofuran, Time= 25h, T= 0 - 24 °C , Title compound not separated from byproducts. **Alexander, Karen; Cook, Stuart; Gibson, Colin L.; Kennedy, Alan R.**; Journal of the Chemical Society, Perkin Transactions 1; nb. 13; (2001); p. 1538 - 1549 View in Reaxys



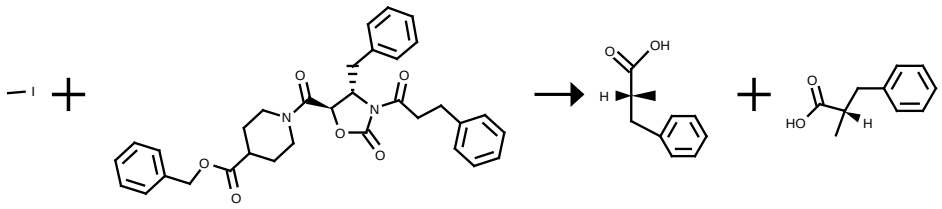
Rx-ID: 8849963 View in Reaxys

Yield	Conditions & References
	With aq. LiOH **in** tetrahydrofuran, Time= 25h, T= 0 - 24 °C , Title compound not separated from byproducts. **Alexander, Karen; Cook, Stuart; Gibson, Colin L.; Kennedy, Alan R.**; Journal of the Chemical Society, Perkin Transactions 1; nb. 13; (2001); p. 1538 - 1549 View in Reaxys



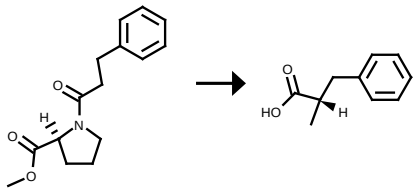
Rx-ID: 8852653 View in Reaxys

Yield	Conditions & References
	With aq. LiOH **in** tetrahydrofuran, Time= 25h, T= 0 - 24 °C , Title compound not separated from byproducts **Alexander, Karen; Cook, Stuart; Gibson, Colin L.; Kennedy, Alan R.**; Journal of the Chemical Society, Perkin Transactions 1; nb. 13; (2001); p. 1538 - 1549 View in Reaxys



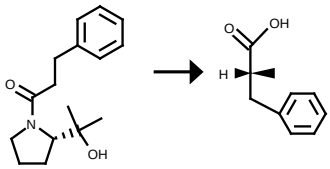
Rx-ID: 9685552 View in Reaxys

Yield	Conditions & References
	Stage 1: With LDA **in** tetrahydrofuran, T= -78 - 0 °C **Stage 2: With** LiOH, aq. H_2O_2 **in** tetrahydrofuran, T= 0 °C , Further stages. Title compound not separated from by-products. **Kotake, Tomoya; Rajesh, S.; Hayashi, Yoshio; Mukai, Yoshie; Ueda, Mitsuhiro; Kimura, Tooru; Kiso, Yoshiaki**; Tetrahedron Letters; **vol.** 45; nb. 18; (2004); p. 3651 - 3654 View in Reaxys



Rx-ID: 19199538 View in Reaxys

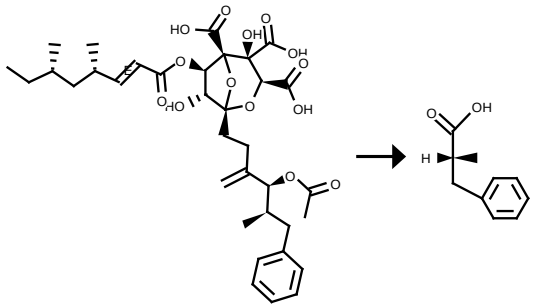
Yield	Conditions & References
	Reaction Steps: 3 1: 83 percent / Mg / diethyl ether / reflux, 4 h -> ambient temperature 2: LDA / tetrahydrofuran / -100 deg C, 2 h -> -50 deg C 3: 3 M aq. HCl / dioxane / 42 h / 90 - 95 °C **With** Mg, LDA, 3 M aq. HCl **in** diethyl ether, tetrahydrofuran, dioxane **Guoqiang, Lin; Hjalmarsson, Mats; Hoegberg, Hans-Erik; Jernstedt, Karen; Norin, Torbjoern**; Acta Chemica Scandinavica, Series B: Organic Chemistry and Biochemistry; **vol.** 38; nb. 9; (1984); p. 795 - 802 View in Reaxys
	Reaction Steps: 3 1: 83 percent / Mg / diethyl ether / reflux, 4 h -> ambient temperature 2: LDA / tetrahydrofuran / -100 deg C, 2 h -> -50 deg C 3: 76 percent / 3 M aq. HCl / dioxane / 42 h / 90 - 95 °C **With** Mg, LDA, 3 M aq. HCl **in** diethyl ether, tetrahydrofuran, dioxane **Guoqiang, Lin; Hjalmarsson, Mats; Hoegberg, Hans-Erik; Jernstedt, Karen; Norin, Torbjoern**; Acta Chemica Scandinavica, Series B: Organic Chemistry and Biochemistry; **vol.** 38; nb. 9; (1984); p. 795 - 802 View in Reaxys



Rx-ID: 19210596 View in Reaxys

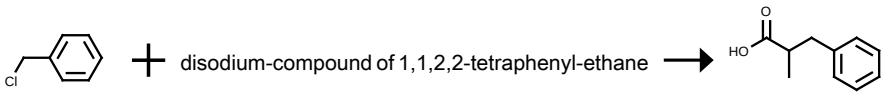
Yield	Conditions & References
	Reaction Steps: 2 1: LDA / tetrahydrofuran / -100 deg C, 2 h -> -50 deg C

	2: 3 M aq. HCl / dioxane / 42 h / 90 - 95 °C **With** LDA, 3 M aq. HCl **in** tetrahydrofuran, dioxane **Guoqiang, Lin; Hjalmarsson, Mats; Hoegberg, Hans-Erik; Jernstedt, Karen; Norin, Torbjoern**; Acta Chemica Scandinavica, Series B: Organic Chemistry and Biochemistry; **vol.** 38; nb. 9; (1984); p. 795 - 802 View in Reaxys



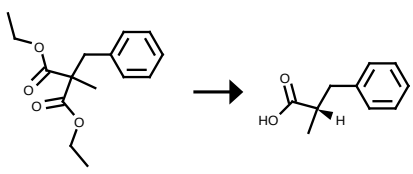
Rx-ID: 19576313 View in Reaxys

Yield	Conditions & References
	Reaction Steps: 5 1: 73 percent / ethyl acetate; diethyl ether / 0.08 h / -15 °C 2: 68 percent / 0.2percent K_2CO_3 / methanol / 1.33 h / 30 °C 3: 89 percent / 4-(N,N-dimethylamino)pyridine / pyridine-d5 / 0.05 h / 80 °C 4: 89 percent / 3percent methanolic HCl / 16 h / Ambient temperature **With** 0.2percent K_2CO_3, 4-(N,N-dimethylamino)pyridine, 3percent methanolic HCl **in** ethyl acetate, diethyl ether, methanol, pyridine-d5 **Wilson, Kenneth E.; Burk, Robert M.; Biftu, Tesfaye; Ball, Richard G.; Hoogsteen, Karst**; Journal of Organic Chemistry; **vol.** 57; nb. 28; (1992); p. 7151 - 7158 View in Reaxys



Rx-ID: 20638978 View in Reaxys

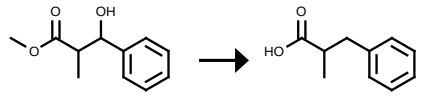
Yield	Conditions & References
	Reaction Steps: 2 1: 52 percent / NaOEt / ethanol / 5 h / Heating 2: 74 percent / H_2O/OH- / ethanol / 5 h / Heating **With** NaOEt, H_2O/OH- **in** ethanol **Knorr, Rudolf; Lattke, Ernst**; Chemische Berichte; **vol.** 114; nb. 6; (1981); p. 2116 - 2131 View in Reaxys



Rx-ID: 21064054 View in Reaxys

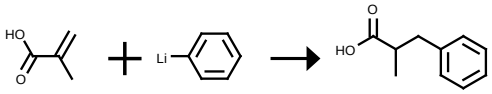
Yield	Conditions & References
	Reaction Steps: 4 1: aq. KOH / ethanol / 24 h / Heating 2: dimethylformamide / 4 h / 100 - 110 °C 3: HCl / 24 h / Ambient temperature

	4: water / 2 h / lipase PS **With** aq. KOH, HCl, water **in** ethanol, dimethylformamide **Colombo, M.; Amici, M. De; Micheli, C. De; Pitre, D.; Carrea, G.; Riva, S.**; Tetrahedron: Asymmetry; **vol.** 2; nb. 10; (1991); p. 1021 - 1030 View in Reaxys



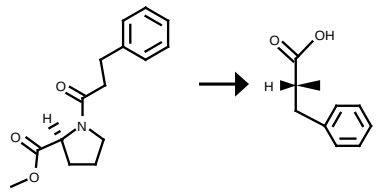
Rx-ID: 21824188 View in Reaxys

Yield	Conditions & References
	Reaction Steps: 2 1: 85 percent / Et_3SiH, BF_3-Et_2O / CH_2Cl_2 / 1 h / 0 °C 2: 95 percent / aq. NaOH / methanol / 1 h / Heating **With** Et_3SiH, BF_3-Et_2O, aq. NaOH **in** CH_2Cl_2, methanol **Smonou, Ioulia; Orfanopoulos, Michael**; Synthetic Communications; **vol.** 20; nb. 9; (1990); p. 1387 - 1397 View in Reaxys



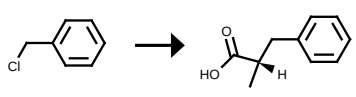
Rx-ID: 5061704 View in Reaxys

Yield	Conditions & References
12 %	**in** tetrahydrofuran, various solvent(s), Time= 2h, T= -70 °C , Addition **Aurell, Maria Jose; Domingo, Luis Ramon; Mestres, Ramon; Munos, Elena; Zaragoza, Ramon Jose**; Tetrahedron; **vol.** 55; nb. 3; (1999); p. 815 - 830 View in Reaxys



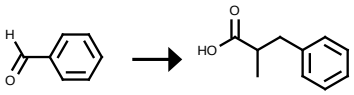
Rx-ID: 19199537 View in Reaxys

Yield	Conditions & References
	Reaction Steps: 3 1: 83 percent / Mg / diethyl ether / reflux, 4 h -> ambient temperature 2: LDA / tetrahydrofuran / -100 deg C, 2 h -> -50 deg C 3: 3 M aq. HCl / dioxane / 42 h / 90 - 95 °C **With** Mg, LDA, 3 M aq. HCl **in** diethyl ether, tetrahydrofuran, dioxane **Guoqiang, Lin; Hjalmarsson, Mats; Hoegberg, Hans-Erik; Jernstedt, Karen; Norin, Torbjoern**; Acta Chemica Scandinavica, Series B: Organic Chemistry and Biochemistry; **vol.** 38; nb. 9; (1984); p. 795 - 802 View in Reaxys



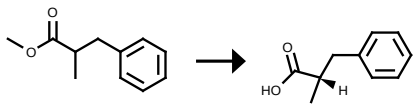
Rx-ID: 21039732 View in Reaxys

Yield	Conditions & References
	Reaction Steps: 5 1: 1.) NaH / 1.) ethyl ether, reflux, 2.) ethyl ether, RT, 6 h 2: aq. KOH / ethanol / 24 h / Heating 3: dimethylformamide / 4 h / 100 - 110 °C 4: HCl / 24 h / Ambient temperature 5: water / 2 h / lipase PS **With** 1.) NaH, aq. KOH, HCl, water **in** ethanol, dimethylformamide **Colombo, M.; Amici, M. De; Micheli, C. De; Pitre, D.; Carrea, G.; Riva, S.**; Tetrahedron: Asymmetry; **vol.** 2; nb. 10; (1991); p. 1021 - 1030 View in Reaxys



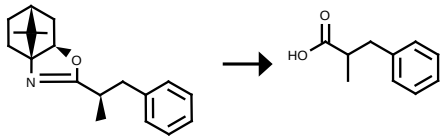
Rx-ID: 21852832 View in Reaxys

Yield	Conditions & References
	Reaction Steps: 3 1: 90 percent / Zn, I_2 / benzene; diethyl ether / 3 h / Heating 2: 85 percent / Et_3SiH, BF_3-Et_2O / CH_2Cl_2 / 1 h / 0 °C 3: 95 percent / aq. NaOH / methanol / 1 h / Heating **With** Zn, I_2, Et_3SiH, BF_3-Et_2O, aq. NaOH **in** benzene, diethyl ether, CH_2Cl_2, methanol **Smonou, Ioulia; Orfanopoulos, Michael**; Synthetic Communications; **vol.** 20; nb. 9; (1990); p. 1387 - 1397 View in Reaxys



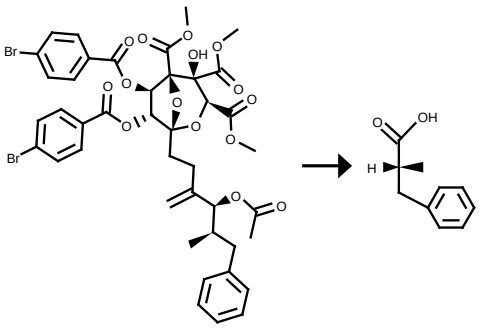
Rx-ID: 2042019 View in Reaxys

Yield	Conditions & References
	With water, Time= 2h, lipase PS **Colombo, M.; Amici, M. De; Micheli, C. De; Pitre, D.; Carrea, G.; Riva, S.**; Tetrahedron: Asymmetry; **vol.** 2; nb. 10; (1991); p. 1021 - 1030 View in Reaxys



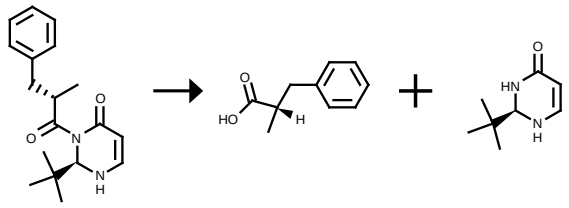
Rx-ID: 8648162 View in Reaxys

Yield	Conditions & References
	With 6 N aq. HCl, Hydrolysis **Chandrasekhar, Sosale; Kausar, Amina**; Tetrahedron: Asymmetry; **vol.** 11; nb. 11; (2000); p. 2249 - 2254 View in Reaxys



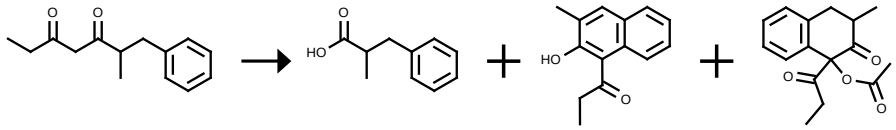
Rx-ID: 19582334 View in Reaxys

Yield	Conditions & References
	Reaction Steps: 2 1: 89 percent / 3percent methanolic HCl / 16 h / Ambient temperature **With** 3percent methanolic HCl **Wilson, Kenneth E.; Burk, Robert M.; Biftu, Tesfaye; Ball, Richard G.; Hoogsteen, Karst**; Journal of Organic Chemistry; **vol.** 57; nb. 28; (1992); p. 7151 - 7158 View in Reaxys



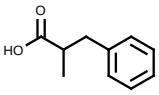
Rx-ID: 2510306 View in Reaxys

Yield	Conditions & References
	With LiOOH **Negrete, George R.; Konopelski, Joseph P.**; Tetrahedron: Asymmetry; **vol.** 2; nb. 2; (1991); p. 105 - 108 View in Reaxys



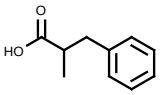
Rx-ID: 4586308 View in Reaxys

Yield	Conditions & References
9 % Chromat., 2 %, 5 %	**With** manganese(III) acetate, acetic acid, Time= 22h, T= 60 °C **Jamie, Joanne F.; Rickards, Rodney W.**; Journal of the Chemical Society, Perkin Transactions 1: Organic and Bio-Organic Chemistry (1972-1999); nb. 21; (1996); p. 2603 - 2614 View in Reaxys
9 % Chromat., 5 %, 2 %	**With** manganese(III) acetate, acetic acid, Time= 22h, T= 60 °C **Jamie, Joanne F.; Rickards, Rodney W.**; Journal of the Chemical Society, Perkin Transactions 1: Organic and Bio-Organic Chemistry (1972-1999); nb. 21; (1996); p. 2603 - 2614 View in Reaxys

α-methyl-α-benzyl-acetoacetic acid ethyl ester → 

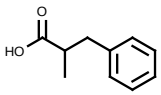
Rx-ID: 7250395 View in Reaxys

Yield	Conditions & References
	With concentrated KOH-solution **Conrad; Bischoff**; Justus Liebigs Annalen der Chemie; **vol.** 204; (1880); p. 180 View in Reaxys

(+-)-2-benzyl-2-methyl-acetoacetic acid ethyl ester → 

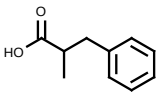
Rx-ID: 7250396 View in Reaxys

Yield	Conditions & References
	With aqueous Ba(OH)2 **Shinya**; Nippon Nogei Kagaku Kaishi; **vol.** 29; (1955); p. 91,92; Chem.Abstr.; (1959); p. 1227 View in Reaxys

(+-)-2-chloro-2-methyl-3-phenyl-propionic acid methyl ester → 

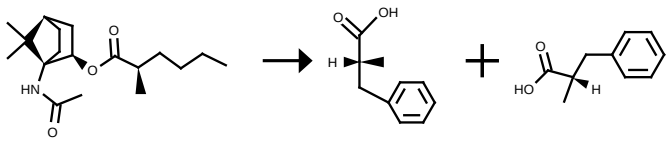
Rx-ID: 7250397 View in Reaxys

Yield	Conditions & References
	With zinc-powder, acetic acid **Dombrowskii et al.**; Zhurnal Obshchei Khimii; **vol.** 27; (1957); p. 419; engl. Ausg. S. 473 View in Reaxys

(+-)-2-methyl-3-phenyl-propionalde-hyde → 

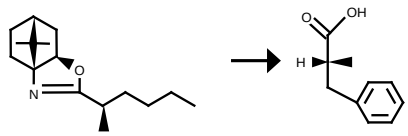
Rx-ID: 7250398 View in Reaxys

Yield	Conditions & References
	With iron isobutyrate, isobutyric acid, oxygen, T= 30 °C **Patent**; **Shell Devel. Co.**; US2010358; (1933) View in Reaxys



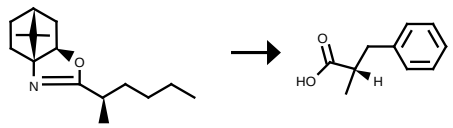
Rx-ID: 8649941 View in Reaxys

Yield	Conditions & References
	With KOH, MeOH, Heating, Hydrolysis, Title compound not separated from byproducts **Chandrasekhar, Sosale; Kausar, Amina**; Tetrahedron: Asymmetry; **vol.** 11; nb. 11; (2000); p. 2249 - 2254 View in Reaxys



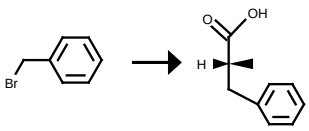
Rx-ID: 15740935 View in Reaxys

Yield	Conditions & References
	Reaction Steps: 2 1: 24 h / Heating 2: KOH; MeOH / Heating **With** KOH, MeOH, 1: Ring cleavage / 2: Hydrolysis **Chandrasekhar, Sosale; Kausar, Amina**; Tetrahedron: Asymmetry; **vol.** 11; nb. 11; (2000); p. 2249 - 2254 View in Reaxys



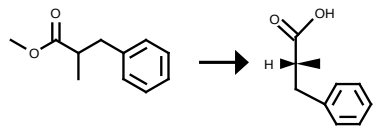
Rx-ID: 15740936 View in Reaxys

Yield	Conditions & References
	Reaction Steps: 2 1: 24 h / Heating 2: KOH; MeOH / Heating **With** KOH, MeOH, 1: Ring cleavage / 2: Hydrolysis **Chandrasekhar, Sosale; Kausar, Amina**; Tetrahedron: Asymmetry; **vol.** 11; nb. 11; (2000); p. 2249 - 2254 View in Reaxys



Rx-ID: 21560605 View in Reaxys

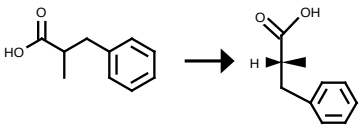
Yield	Conditions & References
	Reaction Steps: 2 1: 1.) LDA, THF, 25 deg C, 2.) -100 deg C 2: 92 percent / 1.0 N HCl / 2 h / 100 °C **With** 1.0 N HCl **Evans, D. A.; Takacs, J. M.**; Tetrahedron Letters; **vol.** 21; (1980); p. 4233 - 4236 View in Reaxys



Rx-ID: 21676783 View in Reaxys

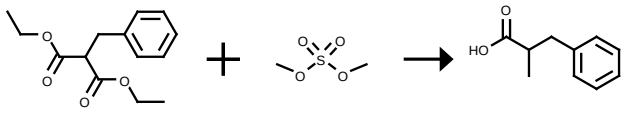
Yield	Conditions & References
	Reaction Steps: 2 1: 44 percent / lipase from Pseudomonas sp. (Amano) / 3 h / Ambient temperature; 0.1 phosphate buffer, pH 7.0 2: 92 percent / lipase from Candida cylindracea / 4.5 h / Ambient temperature; 0.1 M phosphate buffer, pH 7.0 **With** lipase from Pseudomonas sp. (Amano), lipase from Candida cylindracea

	Delnick, Deborah L.; Margolin, Alexey L.; Tetrahedron Letters; **vol.** 31; nb. 47; (1990); p. 6797 - 6798 View in Reaxys



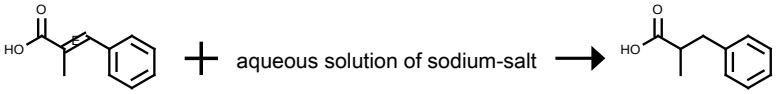
Rx-ID: 438147 View in Reaxys

Yield	Conditions & References
	With quinine **Kipping; Hunter**; Journal of the Chemical Society; **vol.** 83; (1903); p. 1007 View in Reaxys



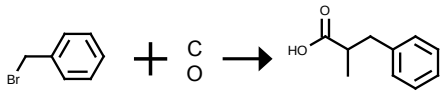
Rx-ID: 4271420 View in Reaxys

Yield	Conditions & References
	With 1.) NaH, 2.) KOH, 1.) THF, 3 h, room temp., 2.) H_2O, room temp., 3.) 190 deg C, Yield given. Multistep reaction **Bucher, von Christoph B.; Linden, Anthony; Heimgartner, Heinz**; Helvetica Chimica Acta; **vol.** 78; nb. 4; (1995); p. 935 - 946 View in Reaxys



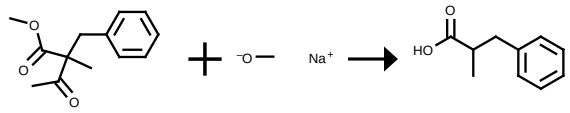
Rx-ID: 7250400 View in Reaxys

Yield	Conditions & References
	With sodium-amalgam, Hydrogenation **Holden; Lapworth**; Journal of the Chemical Society; (1931); p. 2368,2375 View in Reaxys



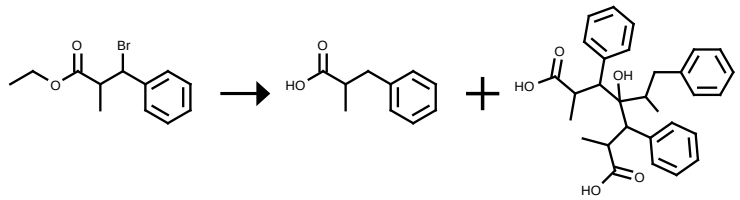
Rx-ID: 17758483 View in Reaxys

Yield	Conditions & References
	Reaction Steps: 3 1: 1.) NaOEt / 1.) EtOH, 30 min, 2.) EtOH, reflux, 2 h 2: aq. KOH / 1 h / Heating 3: conc. H_2SO_4 / 1 h / Heating **With** 1.) NaOEt, aq. KOH, conc. H_2SO_4 **Tyrrell, Elizabeth; Tsang, Michael W. H.; Skinner, George A.; Fawcett, John**; Tetrahedron; **vol.** 52; nb. 29; (1996); p. 9841 - 9852 View in Reaxys



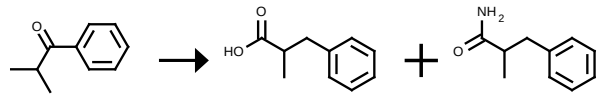
Rx-ID: 470487 View in Reaxys

Yield	Conditions & References
	With methanol, Behandeln des Reaktionsprodukts mit wss. Natronlauge **Patent**; **Kay-Fries Chem. Inc.**; US2413493; (1941) View in Reaxys



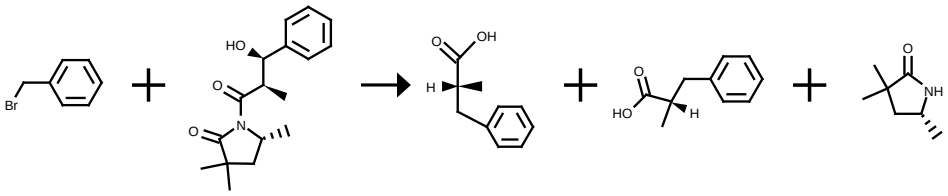
Rx-ID: 472551 View in Reaxys

Yield	Conditions & References
	With magnesium, nachfolgend Verseifen **Salkind; Grabowski**; Zhurnal Russkago Fiziko-Khimicheskago Obshchestva; **vol.** 46; (1914); p. 505; Chem. Zentralbl.; **vol.** 85; nb. II; (1914); p. 1270 View in Reaxys



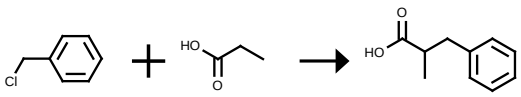
Rx-ID: 796180 View in Reaxys

Yield	Conditions & References
	With yellow aqueous ammonium sulfide, T= 200 °C , unter Druck **Willgerodt; Merk**; Journal fuer Praktische Chemie (Leipzig); **vol.** <2> 80; (1909); p. 193 View in Reaxys



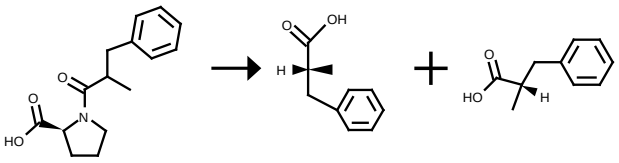
Rx-ID: 2400803 View in Reaxys

Yield	Conditions & References
	With 1.) LDA, 2.) LiOH, 1.) THF, 0 deg C, Yield given. Multistep reaction. Yields of byproduct given. Title compound not separated from byproducts **Davies, Stephen G.; Doisneau, Gilles J.-M.; Prodger, Jeremy C.; Sanganee, Hitesh J.**; Tetrahedron Letters; **vol.** 35; nb. 15; (1994); p. 2373 - 2376 View in Reaxys



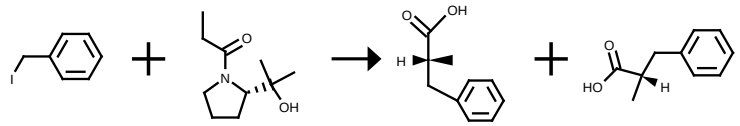
Rx-ID: 2696287 View in Reaxys

Yield	Conditions & References
	With 1)BuLi, diisopropylamine, 1) THF, -60 deg C to room temp., 30 min; 2) THF, -40 deg C to 20 deg C, Yield given. Multistep reaction **Boche, Gernot; Buckl, Klaus; Martens, Diether; Schneider, Dieter R.**; Liebigs Annalen der Chemie; nb. 7; (1980); p. 1135 - 1171 View in Reaxys



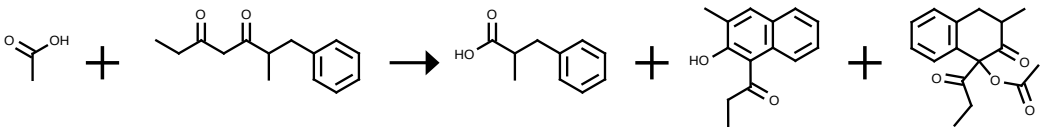
Rx-ID: 9618144 View in Reaxys

Yield	Conditions & References
	With glacial acetic acid, HCl, Heating, Title compound not separated from byproducts **Srivastava, Stuti; Goswami, Lalit N.; Dikshit, Dinesh K.**; Indian Journal of Chemistry, Section B: Organic Chemistry Including Medicinal Chemistry; **vol.** 42; nb. 10; (2003); p. 2628 - 2631 View in Reaxys



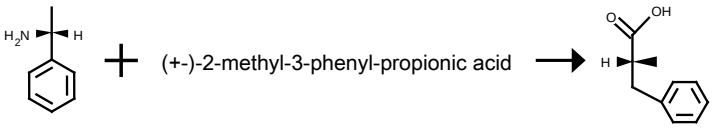
Rx-ID: 3385499 View in Reaxys

Yield	Conditions & References
	With 1.) LDA, 2.) 3 M aq. HCl, 1.) THF, 0 deg C, 2 h, 2.) dioxane, 90-95 deg C, 42 h, Yield given. Multistep reaction. Yields of byproduct given. Title compound not separated from byproducts **Guoqiang, Lin; Hjalmarsson, Mats; Hoegberg, Hans-Erik; Jernstedt, Karen; Norin, Torbjoern**; Acta Chemica Scandinavica, Series B: Organic Chemistry and Biochemistry; **vol.** 38; nb. 9; (1984); p. 795 - 802 View in Reaxys



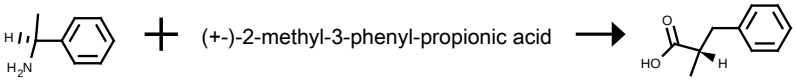
Rx-ID: 4575471 View in Reaxys

Yield	Conditions & References
2 %, 5 %, 9 % Chro-mat.	**With** manganese(III) acetate, Time= 22h, T= 60 °C **Jamie, Joanne F.; Rickards, Rodney W.**; Journal of the Chemical Society, Perkin Transactions 1: Organic and Bio-Organic Chemistry (1972-1999); nb. 21; (1996); p. 2603 - 2614 View in Reaxys



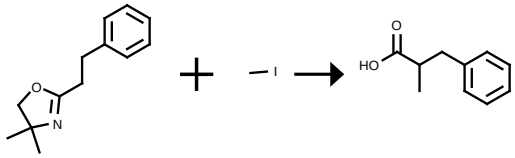
Rx-ID: 7625858 View in Reaxys

Yield	Conditions & References
	Schrecker; Journal of Organic Chemistry; **vol.** 22; (1957); p. 33 View in Reaxys



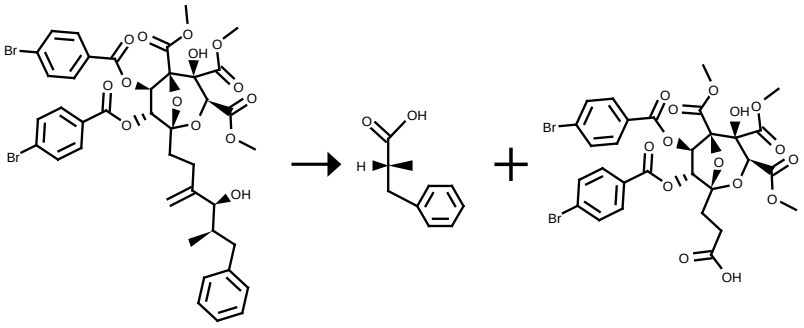
Rx-ID: 7672199 View in Reaxys

Yield	Conditions & References
	Schrecker; Journal of Organic Chemistry; **vol.** 22; (1957); p. 33 View in Reaxys



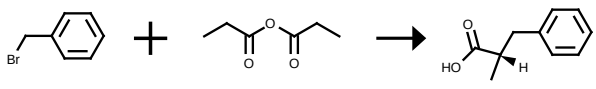
Rx-ID: 1433633 View in Reaxys

Yield	Conditions & References
	(i) nBuLi, (ii) /BRN= 969135/, (iii) aq. HCl, Multistep reaction **Meyers,A.I. et al.**; Journal of Organic Chemistry; **vol.** 39; (1974); p. 2778 - 2783 View in Reaxys



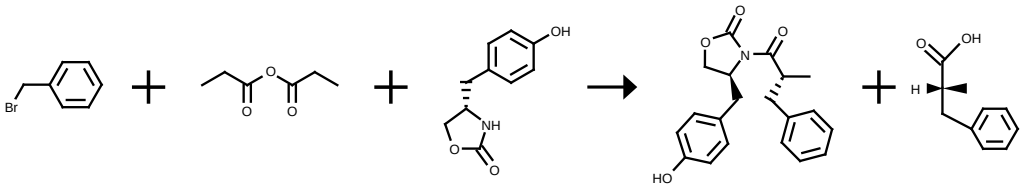
Rx-ID: 3243144 View in Reaxys

Yield	Conditions & References
	Yield given. Multistep reaction. Yields of byproduct given **Wilson, Kenneth E.; Burk, Robert M.; Biftu, Tesfaye; Ball, Richard G.; Hoogsteen, Karst**; Journal of Organic Chemistry; **vol.** 57; nb. 28; (1992); p. 7151 - 7158 View in Reaxys



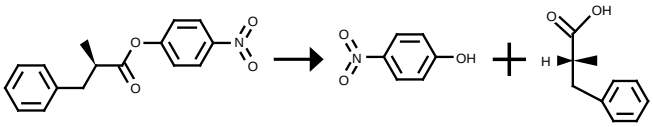
Rx-ID: 11009424 View in Reaxys

Yield	Conditions & References
90 mg	Multistep reaction. **McGhee, Andrea M.; Kizirian, Jean-Claude; Procter, David J.**; Organic and Biomolecular Chemistry; **vol.** 5; nb. 7; (2007); p. 1021 - 1024 View in Reaxys



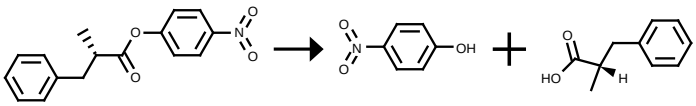
Rx-ID: 26018125 View in Reaxys

Yield	Conditions & References
	Multistep reaction. **Green, Rachel; Merritt, Andrew T.; Bull, Steven D.**; Chemical Communications (Cambridge, United Kingdom); nb. 4; (2008); p. 508 - 510 View in Reaxys



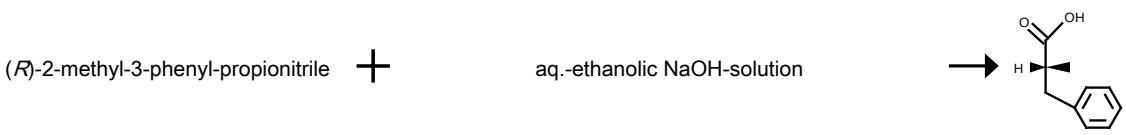
Rx-ID: 3108371 View in Reaxys

Yield	Conditions & References
	With H_2O, phosphate buffer **in** acetonitrile, T= 25 °C , α-chymotrypsin as catalyst, pH: 7.5; stereospecifity in hydrolysis of acylated α-chymotrypsins, Rate constant, Mechanism **Oetvoes, Laszlo; Kraicsovits, Ferenc**; Tetrahedron; **vol.** 48; nb. 23; (1992); p. 5009 - 5014 View in Reaxys



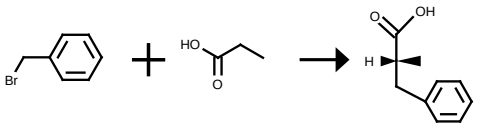
Rx-ID: 3108372 View in Reaxys

Yield	Conditions & References
	With H_2O, phosphate buffer **in** acetonitrile, T= 25 °C , α-chymotrypsin as catalyst, pH: 7.5; stereospecifity in hydrolysis of acylated α-chymotrypsins, Rate constant, Mechanism **Oetvoes, Laszlo; Kraicsovits, Ferenc**; Tetrahedron; **vol.** 48; nb. 23; (1992); p. 5009 - 5014 View in Reaxys



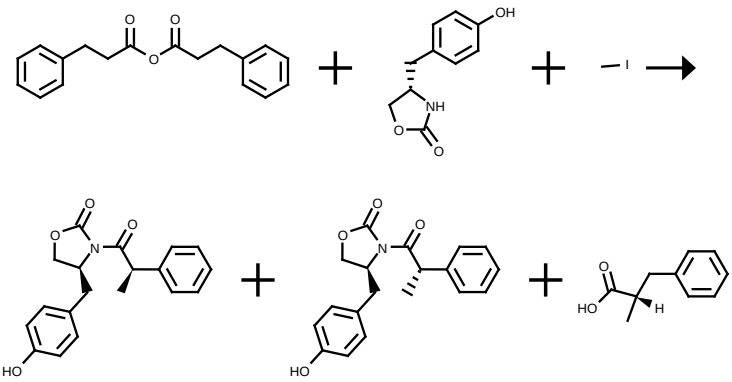
Rx-ID: 7625859 View in Reaxys

Yield	Conditions & References
	Kenyon; Phillips; Pittman; Journal of the Chemical Society; (1935); p. 1079 View in Reaxys



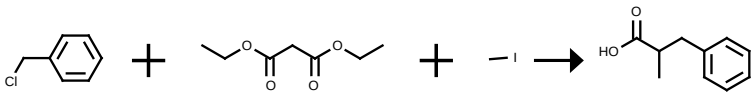
Rx-ID: 9883488 View in Reaxys

Yield	Conditions & References
16.6 mg	Multistep reaction **Kotake, Tomoya; Hayashi, Yoshio; Rajesh, S.; Mukai, Yoshie; Takiguchi, Yuka; Kimura, Tooru; Kiso, Yoshiaki**; Tetrahedron; **vol.** 61; nb. 15; (2005); p. 3819 - 3834 View in Reaxys



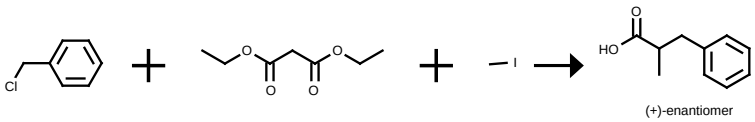
Rx-ID: 26018123 View in Reaxys

Yield	Conditions & References
	Multistep reaction. **Green, Rachel; Merritt, Andrew T.; Bull, Steven D.**; Chemical Communications (Cambridge, United Kingdom); nb. 4; (2008); p. 508 - 510 View in Reaxys



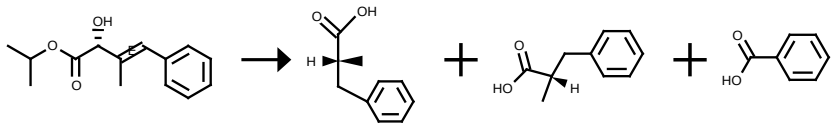
Rx-ID: 1203266 View in Reaxys

Yield	Conditions & References
	Kashiwagi,T. et al.; Tetrahedron; **vol.** 26; (1970); p. 3619 - 3629 View in Reaxys



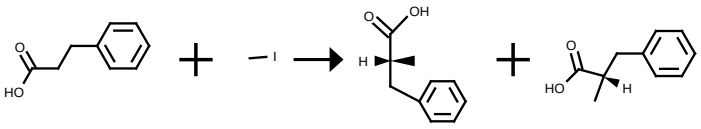
Rx-ID: 1203267 View in Reaxys

Yield	Conditions & References
	Kashiwagi,T. et al.; Tetrahedron; **vol.** 26; (1970); p. 3619 - 3629 View in Reaxys



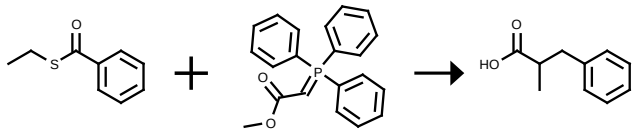
Rx-ID: 2792917 View in Reaxys

Yield	Conditions & References
	Yield given. Multistep reaction. Yields of byproduct given **Yu, Hongtao; Simon, Helmut**; Tetrahedron; **vol.** 47; nb. 43; (1991); p. 9035 - 9052 View in Reaxys



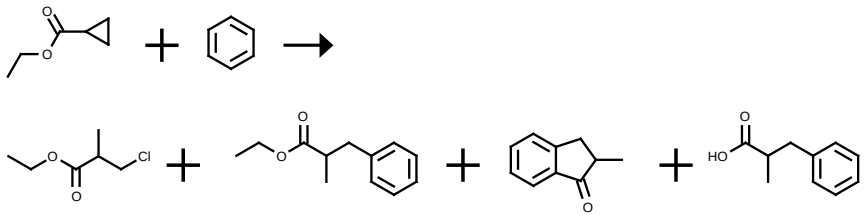
Rx-ID: 9901344 View in Reaxys

Yield	Conditions & References
	Multistep reaction. Title compound not separated from byproducts **Kotake, Tomoya; Hayashi, Yoshio; Rajesh, S.; Mukai, Yoshie; Takiguchi, Yuka; Kimura, Tooru; Kiso, Yoshiaki**; Tetrahedron; **vol.** 61; nb. 15; (2005); p. 3819 - 3834 View in Reaxys



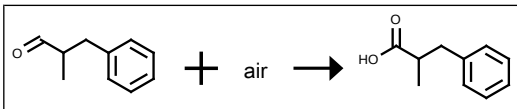
Rx-ID: 1340292 View in Reaxys

Yield	Conditions & References
	(i) Raney-Ni, THF, (ii) KOH, aq. EtOH, (iii) H_2, Raney-Ni, aq. MeOH, Multistep reaction **Bestmann,H.J. et al.**; Chemische Berichte; **vol.** 99; (1966); p. 1906 - 1911 View in Reaxys



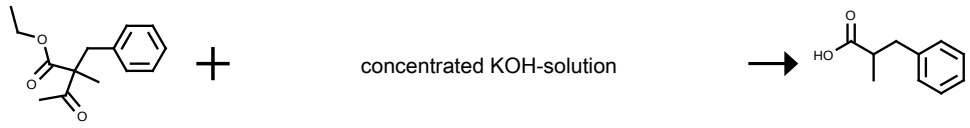
Rx-ID: 3917528 View in Reaxys

Yield	Conditions & References
	With $AlCl_3$, Ambient temperature, Mechanism, Product distribution **Pinnick, Harold W.; Brown, Stephen P.; McLean, Elizabeth A.; Zoller, Linwood W.**; Journal of Organic Chemistry; **vol.** 46; nb. 18; (1981); p. 3758 - 3760 View in Reaxys



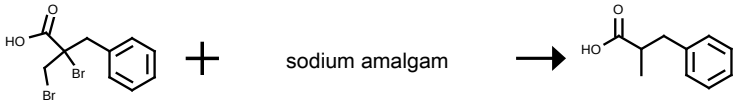
Rx-ID: 7250399 View in Reaxys

Yield	Conditions & References
	v. Miller; Rohde; Chemische Berichte; **vol.** 23; (1890); p. 1080 View in Reaxys



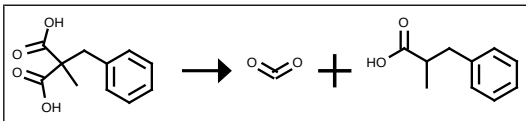
Rx-ID: 7987451 View in Reaxys

Yield	Conditions & References
	Bischoff; Conrad; Justus Liebigs Annalen der Chemie; **vol.** 204; (1880); p. 179,180 View in Reaxys



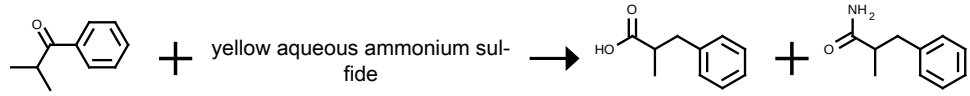
Rx-ID: 7987452 View in Reaxys

Yield	Conditions & References
	Simonsen; Journal of the Chemical Society; **vol.** 117; (1920); p. 569 View in Reaxys



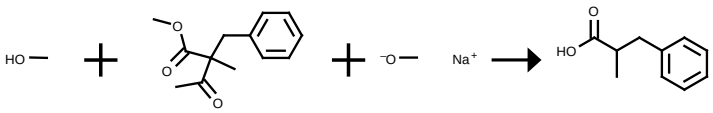
Rx-ID: 5809826 View in Reaxys

Yield	Conditions & References
	Conrad; Bischoff; Justus Liebigs Annalen der Chemie; **vol.** 204; (1880); p. 178 View in Reaxys



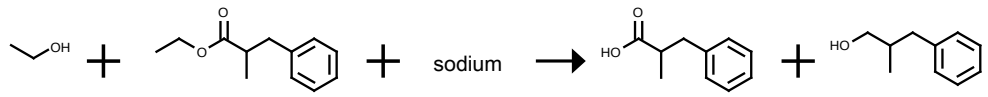
Rx-ID: 5815025 View in Reaxys

Yield	Conditions & References
	T= 200 °C , unter Druck **Willgerodt; Merk**; Journal fuer Praktische Chemie (Leipzig); **vol.** <2> 80; (1909); p. 193 View in Reaxys



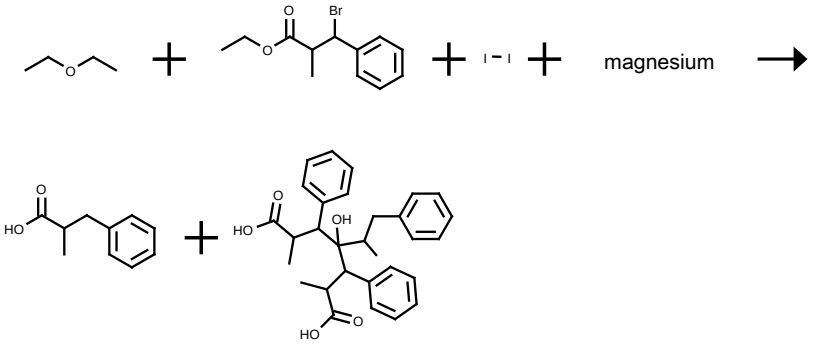
Rx-ID: 55936 View in Reaxys

Yield	Conditions & References
	Behandeln des danach isolierten Reaktionsprodukts mit wss. Natronlauge **Patent**; **Kay-Fries Chem. Inc.**; US2413493; (1941) View in Reaxys



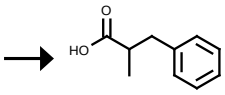
Rx-ID: 7047562 View in Reaxys

Yield	Conditions & References
	v. Braun; Grabowski; Kirschbaum; Chemische Berichte; **vol.** 46; (1913); p. 1280 View in Reaxys



Rx-ID: 8202788 View in Reaxys

Yield	Conditions & References
	nachfolgend Verseifen des Reaktionsproduktes **Salkind; Grabowski**; Zhurnal Russkago Fiziko-Khimicheskago Obshchestva; **vol.** 46; (1914); p. 505; Chem. Zentralbl.; **vol.** 85; nb. II; (1914); p. 1270 View in Reaxys

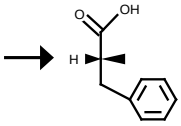


Rx-ID: 7250394 View in Reaxys

Yield	Conditions & References
99%	Example Name 1 Example Title EXAMPLE 1 The benzylmethylmalonic acid (49.2 g) was dissolved in 400 ml of acetonitrile with 1.69 g of cuprous oxide and heated to reflux for 5 hours. The solvent was removed under vacuum. The residue was taken up in 400 ml of diethyl ether and rinsed with 10percent hydrochloric acid (*300 ml), 300 ml of saturated sodium chloride, dried over magnesium sulfate, filtered and concentrated. The residue was purified by flash chromatography (5percentto 10percent methanol in chloroform) to yield 38.3 g of 2-benzylpropionic acid (99percent yield). **Patent**; **Merrell Pharmaceuticals Inc.**; US5840729; (1998); (A1) English View in Reaxys
99%	Example Name 1 Example Title EXAMPLE 1 The benzylmethylmalonic acid (49.2 g) was dissolved in 400 ml of acetonitrile with 1.69 g of cuprous oxide and heated to reflux for 5 hours. The solvent was removed under vacuum. The residue was taken up in 400 ml of diethyl ether and rinsed with 10percent hydrochloric acid (2*300 ml), 300 ml of saturated sodium chloride, dried over magnesium sulfate, filtered and concentrated. The residue was purified by flash chromatography (5percentando10percent methanol in chloroform) to yield 38.3 g of 2-benzylpropionic acid (99percent yield). **Patent**; **Merrell Dow Pharmaceuticals Inc.**; US5047534; (1991); (A1) English View in Reaxys

99%	Example Name 8 Example Title EXAMPLE 8 The benzylmethylmalonic acid (49.2 g) was dissolved in 400 ml of acetonitrile, treated with 1.69 g of cuprous oxide and heated to reflux for 5 hours. The solvent was removed under vacuum and the residue taken up in 400 ml of diethyl ether and rinsed with 10percent hydrochloric acid (2*300 ml), saturated sodium chloride (300 ml), dried over magnesium sulfate, filtered and concentrated. The residue was purified by flash chromatography (5percent to 10percent methanol in chloroform) to yield 38.37 g of 2-benzylpropionic acid (99percent yield). **Patent**; **Merrell Dow Pharmaceuticals Inc.**; US5047534; (1991); (A1) English View in Reaxys **Patent**; **Merrell Pharmaceuticals Inc.**; US5840729; (1998); (A1) English View in Reaxys
	Reinheckel,H.; Tauber,G.; Monatshefte fuer Chemie; **vol.** 98; (1967); p. 1944 - 1953 View in Reaxys **Patent**; **Farbwerke Hoechst A.G.**; DE1300565; (1965); Chem.Abstr.; **vol.** 71; nb. 91098t; (1969) View in Reaxys **Harmon et al.**; Journal of Organic Chemistry; **vol.** 34; (1969); p. 3684 View in Reaxys **Normant; Angelo**; Bulletin de la Societe Chimique de France; (1962); p. 814 View in Reaxys **Hjelte**; Acta Chemica Scandinavica (1947-1973); **vol.** 15; (1961); p. 1200 View in Reaxys **Spassov; Stefanova**; Journal of Molecular Structure; **vol.** 53; (1979); p. 219,220,223 View in Reaxys **Larcheveque**; Annales de Chimie (Cachan, France); **vol.** 5; nb. 14; (1970); p. 129,132 View in Reaxys **Kuchar et al.**; Collection of Czechoslovak Chemical Communications; **vol.** 44; (1979); p. 183,186 View in Reaxys **Aviron-Violet et al.**; Journal of Molecular Catalysis; **vol.** 5; (1979); p. 44; Chem.Abstr.; **vol.** 91; nb. 57462k View in Reaxys **Aguiar et al.**; Journal of Organic Chemistry; **vol.** 41; nb. 9; (1976); p. 1545,1547 View in Reaxys **Byers; Wolfenden**; Biochemistry; **vol.** 12; (1973); p. 2070 View in Reaxys **Marvell et al.**; Journal of Organic Chemistry; **vol.** 25; (1960); p. 608,610 View in Reaxys **Marshall et al.**; Journal of Organic Chemistry; **vol.** 31; (1966); p. 4315,4317 View in Reaxys **Horner et al.**; Liebigs Annalen der Chemie; (1979); p. 341,351 View in Reaxys **Pastuschak; Dombrowskii**; J. Gen. Chem. USSR (Engl. Transl.); **vol.** 34; (1964); p. 3150; Zhurnal Obshchei Khimii; **vol.** 34; (1964); p. 3110 View in Reaxys **Gossauer; Ossorio**; Anales de la Real Sociedad Espanola de Fisica y Quimica, Serie B: Quimica; **vol.** 59; (1963); p. 185,189 View in Reaxys **Larcheveque**; Comptes Rendus des Seances de l'Academie des Sciences, Serie C: Sciences Chimiques; **vol.** 268; (1969); p. 640 View in Reaxys
	Example Name 8 Example Title EXAMPLE 8 After six additional recrystallizations from 50percent aqueous ethanol there remained 18.8 g of the quinine salt. The mother liquors from the above recrystallizations were acidified and extracted to yield 24.86 g of recovered 2-benzylpropionic acid. **Patent**; **Merrell Dow Pharmaceuticals Inc.**; US5047534; (1991); (A1) English View in Reaxys **Patent**; **Merrell Pharmaceuticals Inc.**; US5840729; (1998); (A1) English

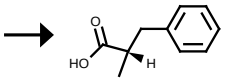
	View in Reaxys



Rx-ID: 7625855 View in Reaxys

Yield	Conditions & References
91%	Example Name 19 Example Title EXAMPLE 19 STR45 EXAMPLE 19 STR45 A 10 mL recovery flask equipped with a magnetic stirrer was charged with [1S-[1R*(S*), 2R*]]-N-(2-hydroxy-1-methyl-2-phenylethyl)-N,2-dimethyl benzenepropion amide (75 mg, 0.24 mmol, 1.0 equiv) and a mixture of tetrabutylammonium hydroxide (0.78g of a 40percent aqueous solution, 1.21 mmol, 5 equiv) in 4:1 water: tert-butanol (5 mL), and the resulting mixture was refluxed for 22 h under a Liebig condenser. The reaction mixture was basified with 1N sodium hydroxide (100 mL), and extracted with ether (3*10 mL). The aqueous phase was acidified with 3N HCl, saturated with sodium chloride, and extracted with ethyl acetate (3*15 mL). The combined ethyl acetate extracts were washed once with water (5 mL), dried over sodium sulfate, filtered, and concentrated to give R-α-methyl benzenepropionic acid (36 mg, 91percent yield) with an enantiomeric excess of 94percent (as determined by chiral GC analysis of the R-α-methylbenzyl amide of the acid). 1H NMR (300 MHz, CDCl3)δ7.25 (m, 5H), 3.09 (dd, 1H, J1=6.1 Hz, J2=13.1 Hz), 2.75 (m, 2H, H), 1.18 (d, 3H, J=6.8 Hz); 13C NMR (75.5 MHz, CDCl3)δ182.5, 139.0, 129.0, 128.4, 126.4, 41.2, 39.3, 16.5; FTIR (neat film) cm-1 2976 (s,br, OH), 2657 (m, br), 1948 (w), 1877 (w), 1806 (w), 1707 (s, C=O), 1496 (m), 1454 (s), 1417 (m), 1294 (s), 1241 (s), 1117 (w), 1082 (w), 942 (m), 744 (m), 700 (s), 549 (w). **Patent**; **California Institute of Technology**; US5488131; (1996); (A1) English View in Reaxys
87%	Example Name 18 Example Title R-α-methyl benzenepropionic acid EXAMPLE 18 STR44 R-α-methyl benzenepropionic acid A 50 mL round-bottomed flask was charged with [1S-[1R*(S*), 2R*]]-N-(2-hydroxy-1-methyl-2-phenylethyl)-N,2-dimethyl benzenepropion amide (1.2458g, 4.0 mmol) and 10:8 18N sulfuric acid: dioxane (18 mL). The resulting mixture was refluxed for 1 h under a Liebig condenser. The mixture was then basified with 50percent aqueous sodium hydroxide, and washed with dichloromethane (2*50 mL). The remaining aqueous phase was acidified with 6N aqueous sulfuric acid and extracted with dichloromethane (3*50 mL). These extracts were dried over anhydrous sodium sulfate, filtered, and concentrated under reduced pressure to afford R-α-methyl benzenepropionic acid (0.5719 g, 87percent yield) with an enantiomeric excess of 97percent (as determined by chiral GC analysis of the R-α-methylbenzyl amide of the acid). **Patent**; **California Institute of Technology**; US5488131; (1996); (A1) English View in Reaxys
81%	Example Name 8 Example Title Preparation of Some Representative Intermediates for the Elaboration of the N-Terminus of the Compound of Formula 1 To a cooled solution (0.deg.) of the latter oxazolidine derivative (26.7 g, 97.0 mmol) in THF (9500 mL) and H_2 O (1.5 L) was added a 30percent aqueous solution of hydrogen peroxide (55 mL, 0.5 mol), followed by the addition of a solution of LiOH.H_2 O (8.67 g, 200 mmol) in H_2 O (15 mL). The resultant mixture was vigorously stirred for 1 h at 0.deg.. A solution of Na_2 SO_3 (100 g) in H_2 O (700 mL) and solid $NaHCO_3$ (20 g) were added sequentially. After 5 min, the THF was removed under reduce pressure. The residual aqueous solution was washed with CH_2 Cl_{12} (3 X). The aqueous phase was rendered acidic with 10percent aqueous HCl_1 and extracted with Et_2 O (3 X). The combined Et_2 O extracts were washed with brine, dried ($MgSO_4$) and concentrated to afford α(R)-methylbenzenepropionic acid as a clear liquid (12.8 g, 81percent yield).

	^{1} H NMR ($CDCl_3$) δ 7.33-7.19 (m, 5H), 3.10 (dd, J=13.5, 6.5, 1H), 2.83-2.74 (m, 1H), 2.79 (dd, J=13.5, 8 Hz, 1H), 1.20 (d, J=7 Hz, 3H). **Patent**; **Bio-Mega/Boehringer Ingelheim Research, Inc.**; US5672586; (1997); (A1) English View in Reaxys
	Meyers,A.I. et al.; Heterocycles; **vol.** 6; (1977); p. 971 - 977 View in Reaxys **Valentine; Scott**; Synthesis; (1978); p. 329,343 View in Reaxys **Bezmer; Brown**; Journal of Pharmaceutical Sciences; **vol.** 60; (1971); p. 583,584 View in Reaxys
	Example Name 8 Example Title EXAMPLE 8 This acid was combined with 18.4 g of d-(+)-α-methylbenzylamine in 160 ml of ethyl acetate, dissolved by heating on a steam bath, cooled, and the precipitate was collected to yield 35 g of the amine salt. After three additional recrystallizations from ethyl acetate, the amine salt (0.4 g) was treated with 100 ml of 1M sulfuric acid. The aqueous layer was extracted with chloroform (2*100 ml) and the combined organic extracts dried over magnesium sulfate, filtered and concentrated. The residue was purified by radial chromatography (5percent methanol in chloroform, 2 mm plate) to yield 186 mg of (R)-2-benzylpropionic acid. **Patent**; **Merrell Pharmaceuticals Inc.**; US5840729; (1998); (A1) English View in Reaxys
	Example Name 8 Example Title EXAMPLE 8 This acid was combined with 18.4 g of d-(+)-α-methylbenzylamine in 160 ml of ethyl acetate, dissolved by heating on a steam bath, cooled, and the precipitate was collected to yield 35 g of the amine salt. After three additional recrystallizations from ethyl acetate, the amine salt (0.4 g) was treated with 100 ml of 1M sulfuric acid. The aqueous layer was extracted with chloroform (2 x 100 ml) and the combined organic extracts dried over magnesium sulfate, filtered and concentrated. The residue was purified by radial chromatography (5percent methanol in chloroform, 2 mm plate) to yield 186 mg of (R)-2-benzylpropionic acid. **Patent**; **Merrell Dow Pharmaceuticals Inc.**; US5047534; (1991); (A1) English View in Reaxys



Rx-ID: 7672197 View in Reaxys

Yield	Conditions & References
	Valentine; Scott; Synthesis; (1978); p. 329,343 View in Reaxys
	Example Name 1 Example Title EXAMPLE 1 After six additional recrystallizations from 50percent aqueous ethanol, there remained 18.8 g of the quinine salt. The quinine salt (0.34 g) was treated with 100 ml of 1M sulfuric acid and extracted with chloroform (2*100 ml). The combined organic extracts were dried over magnesium sulfate, filtered and concentrated. The residue was purified by radial chromatography (5percent to 10percent methanol in chloroform, 2 mm plate) to yield 89 mg of (S)-2-methyl-3-phenylpropionic acid. **Patent**; **Merrell Dow Pharmaceuticals Inc.**; US5047534; (1991); (A1) English View in Reaxys **Patent**; **Merrell Pharmaceuticals Inc.**; US5840729; (1998); (A1) English View in Reaxys