Query

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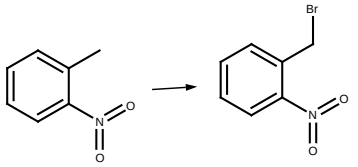
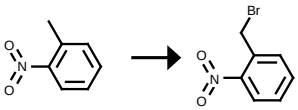
1. Query	 Search as: Product, As drawn, No salts, No mixtures	3 reactions	2012-03-15 02h:03m:04s (EST)

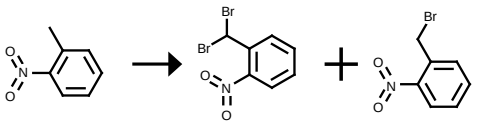


Rx-ID: 280986 View in Reaxys 1/3

Yield	Conditions & References
84.5 %	Example Name 1 O-nitrotoluene (3.4g, 25mmol) is dissolved in 140ml of anhydrous carbon tetrachloride, and benzoyl peroxide (0.290g, 1.2mmol) and N-bromosuccinimide (4.450g, 25mmol) are added. The reaction mixture is stirred, heated at reflux for 4 hours until N-bromosuccinimide is floated up completely. Cooling and then filtrating, washing with cold sodium bicarbonate aqueous solution (2x), and then ice-water (2x), and drying over anhydrous magnesium sulfate overnight. After filtration and concentration, the product is recrystallized with aqueous ethanol to obtain o-nitrobenzyl bromide as a white crystal, with a yield of 84.5percent, m.p. 45-47.deg.C. **With** N-bromosuccinmide, dibenzoyl peroxide **in** tetrachloromethane, Time= 4h, Reflux **Patent**; **Jiangsu Goworth Investment Co. Ltd; Shanghai Institute of Pharmaceutical Industry**; EP2308868; (2011); (A1) English View in Reaxys
84.5 %	Example Name 1 O-nitrotoluene (3.4 g, 25 mmol) is dissolved in 140 ml of anhydrous carbon tetrachloride, and benzoyl peroxide (0.290 g, 1.2 mmol) and N-bromosuccinimide (4.450 g, 25 mmol) are added. The reaction mixture is stirred, heated at reflux for 4 hours until N-bromosuccinimide is floated up completely. Cooling and then filtrating, washing with cold sodium bicarbonate aqueous solution (2.x.), and then ice-water (2.x.), and drying over anhydrous magnesium sulfate overnight. After filtration and concentration, the product is recrystallized with aqueous ethanol to obtain o-nitrobenzyl bromide as a white crystal, with a yield of 84.5percent, m.p. 45-47.deg. C. **With** N-bromosuccinmide, dibenzoyl peroxide **in** tetrachloromethane, Time= 4h, Reflux **Patent**; **JIANGSU GOWORTH INVESTMENT CO. LTD; SHANGHAI INSTITUTE OF PHARMACEUTICAL INDUSTRY**; US2011/152323; (2011); (A1) English View in Reaxys
81 %	**With** N-bromosuccinmide, meta-chloroperoxybenzoic acid, Time= 3h, Heating, Irradiation **Rigo, Benoit; Dolaine, Regis; Ghammarti, Samira El; Couturier, Daniel**; Journal of Heterocyclic Chemistry; **vol.** 33; nb. 4; (1996); p. 1063 - 1066 View in Reaxys
77 %	**With** N-bromosuccinmide **in** tetrachloromethane, Time= 3h, Heating, Irradiation **Majumder, P. L.; Sarkar, A. K.**; Journal of the Indian Chemical Society; **vol.** 66; (1989); p. 673 - 680 View in Reaxys
69 %	**With** N-bromosuccinmide, dibenzoyl peroxide **in** tetrachloromethane, T= 80 °C **Mishra, Jitendra Kumar; Garg, Puja; Dohare, Preeti; Kumar, Ashutosh; Siddiqi, Mohammad Imran; Ray, Madhur; Panda, Gautam**; Bioorganic and Medicinal Chemistry Letters; **vol.** 17; nb. 5; (2007); p. 1326 - 1331 View in Reaxys
46 %	**With** N-bromosuccinmide, dibenzoyl peroxide **in** tetrachloromethane, Time= 21h, Heating, Irradiation **Collins, David J.; Drygala, Peter F.; Swan, John M.**; Australian Journal of Chemistry; **vol.** 36; nb. 10; (1983); p. 2095 - 2110 View in Reaxys
41 %	**With** N-bromosuccinmide, meta-chloroperoxybenzoic acid **in** tetrachloromethane, Time= 9h, Heating **Baldwin, Jack E.; Cha, Jin K.; Kruse, Lawrence I.**; Tetrahedron; **vol.** 41; nb. 22; (1985); p. 5241 - 5260 View in Reaxys
30 %	**With** N-bromosuccinmide, Time= 0.15h, microwave irradiation **Goswami, Shyamaprosad; Dey, Swapan; Jana, Subrata; Adak, Avijit Kumar**; Chemistry Letters; **vol.** 33; nb. 7; (2004); p. 916 - 917

	View in Reaxys
29 %	Example Name 1.1 A mixture of l-methyl-2-nitrobenzene (20 g, 144.53 mmol), NBS (28.4 g, 158.85 mmol), and AIBN (0.2 g) in CCl_4 (150 mL) was refiuxed for 3h, then cooled to RT, filtered, and concentrated under vacuum. The residue was partitioned between EtOAc and H_2O and the aqueous phase was extracted with EtOAc (3x300ml). The organics were combined, dried over Na_2SO_4, and concentrated under vacuum. The residue was purified by column chromatography on silica gel (eluting with 1 :20 <n="54"/>Attorney Docket No. KO 152-401 -PCEtOAc/PE) to afford 1O g (29percent) of l-(bromo-methyl)-2-nitrobenzene as a white solid. 1HNMR (300MHz, $DMSOd_6$) δ 8.08 (s, IH), 7.75 (m, 2H), 7.60 (m, IH), 4.94 (s, 2H) **With** N-bromosuccinmide, 2,2'-azo-bisisobutyronitrile **in** tetrachloromethane, Time= 3h, Heating / reflux **Patent**; **KALYPSYS, INC.**; WO2009/29625; (2009); (A1) English View in Reaxys
	With tetrachloromethane, N-bromosuccinmide, dibenzoyl peroxide **Kornblum; Iffland**; Journal of the American Chemical Society; **vol.** 71; (1949); p. 2137,2138,2140 View in Reaxys
	With (R)-bromo alcohol, dibenzoyl peroxide **Koeroesi,J.**; Monatshefte fuer Chemie; **vol.** 100; (1969); p. 1222 - 1232 View in Reaxys
	With N-bromosuccinmide **Huppatz,J.L.**; Australian Journal of Chemistry; **vol.** 26; (1973); p. 1307 - 1318 View in Reaxys **Matsumoto,I.**; Chemical and Pharmaceutical Bulletin; **vol.** 15; (1967); p. 1990 - 1995 View in Reaxys
	With bromine, dibenzoyl peroxide **in** tetrachloromethane, Irradiation **Celnik,K.; Jankowski,Z.**; Polish Journal of Chemistry; **vol.** 52; (1978); p. 947 - 951 View in Reaxys
	With N-bromosuccinmide, meta-chloroperoxybenzoic acid **in** tetrachloromethane, Time= 5h, Heating **Boyer, S. K.; Fitchett, G.; Wasley, J. W. F.; Zaunius, G.**; Journal of Heterocyclic Chemistry; **vol.** 21; (1984); p. 833 - 836 View in Reaxys
	With N-bromosuccinmide, meta-chloroperoxybenzoic acid **in** tetrachloromethane **Corre, M. Le; Hercouet, A.; Stanc, Y. Le; Baron, H. Le**; Tetrahedron; **vol.** 41; nb. 22; (1985); p. 5313 - 5320 View in Reaxys
	With N-bromosuccinmide, meta-chloroperoxybenzoic acid **Sikkar, Rein; Martinson, Per**; Acta Chemica Scandinavica, Series B: Organic Chemistry and Biochemistry; **vol.** 34; nb. 8; (1980); p. 551 - 558 View in Reaxys
	With N-bromosuccinmide, meta-chloroperoxybenzoic acid **in** tetrachloromethane, Time= 6h, Heating **Stambach, JF; Kanmacher, I; Jung, L; Schott, C; Heitz, C; Stoclet, JC**; European Journal of Medicinal Chemistry; **vol.** 28; nb. 5; (1993); p. 427 - 432 View in Reaxys
	With N-bromosuccinmide **Berg, E. M. M. van den; Baldew, A. U.; Goede, A. T. J. W. de; Raap, J.; Lugtenburg, J.**; Recueil des Travaux Chimiques des Pays-Bas; **vol.** 107; nb. 2; (1988); p. 73 - 81 View in Reaxys

	With N-bromosuccinmide, dibenzoyl peroxide **in** tetrachloromethane, Heating **Jan, Thierry; Dupas, Beatrice; Floner, Didier; Moinet, Claude**; Tetrahedron Letters; **vol.** 43; nb. 34; (2002); p. 5949 - 5952 View in Reaxys
	With N-bromosuccinmide, dibenzoyl peroxide **in** tetrachloromethane, Time= 5h, Heating **Murata, Shigeru; Tsubone, Yasuhiro; Kawai, Reina; Eguchi, Daisuke; Tomioka, Hideo**; Journal of Physical Organic Chemistry; **vol.** 18; nb. 1; (2005); p. 9 - 20 View in Reaxys
	With N-bromosuccinmide, dibenzoyl peroxide **in** tetrachloromethane, Time= 12h, Heating **Makhija, Mahindra T.; Kasliwal, Rajesh T.; Kulkarni, Vithal M.; Neamati, Nouri**; Bioorganic & Medicinal Chemistry; **vol.** 12; nb. 9; (2004); p. 2317 - 2334 View in Reaxys
	With N-bromosuccinmide, Time= 16h, T= 36 °C , Irradiation, neat (no solvent) **Jereb, Marjan; Zupan, Marko; Stavber, Stojan**; Helvetica Chimica Acta; **vol.** 92; nb. 3; (2009); p. 555 - 566 View in Reaxys
	Example Title General procedure for the bromination of methylarenes. General procedure: To a solution of the methylarene derivative (1.0 eq.) in C6H6 is added N-bromosuccinimide (1.05 eq.), azobisisobutyronitrile (0.25 eq.) and Br2 (0.25 mL). The solution was heated to reflux for 24h. Upon completion, the reaction mixture was cooled and washed with H2O (3X). The organic layer was washed successively with sat'd. aq. Na2S2O3 (2X), sat'd. aq. NaCl (1X), dried over MgSO4 and concentrated. **With** N-bromosuccinmide, 2,2'-azo-bisisobutyronitrile, bromine **in** benzene, Time= 24h, Reflux **Motto, John M.; Montemayer, Laura K.; Sheepwash, Erin E.; Schwan, Adrian L.; Castillo, Alvaro; Greer, Alexander**; Tetrahedron; **vol.** 67; nb. 5; (2011); p. 1002 - 1010 View in Reaxys



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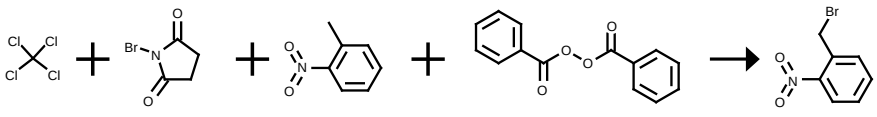
Yield	Conditions & References
41 % Chromat., 52 % Chromat.	**With** bromine **in** tetrachloromethane, Heating, Irradiation **Ong-Lee, Avelina; Sylvester, Leo; Wasley, Jan W. F.**; Journal of Heterocyclic Chemistry; **vol.** 20; (1983); p. 1565 - 1569 View in Reaxys
52 % Chromat., 41 % Chromat.	**With** bromine **in** tetrachloromethane, Heating, Irradiation **Ong-Lee, Avelina; Sylvester, Leo; Wasley, Jan W. F.**; Journal of Heterocyclic Chemistry; **vol.** 20; (1983); p. 1565 - 1569 View in Reaxys



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Yield	Conditions & References
	Kornblum; Iffland; Journal of the American Chemical Society; **vol.** 71; (1949); p. 2137,2138,2140 View in Reaxys