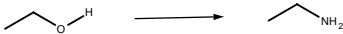


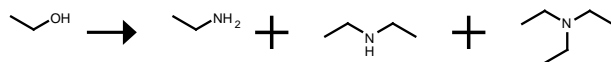
Query

	Query	Results	Date
1. Query	 Search as: Product, As drawn, No salts, No mixtures	35 reactions	2010-07-30 05h:54m:38s (EST)

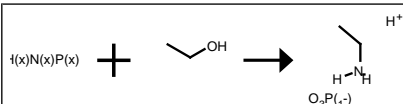

 Rx-ID: 194010 [View in Reaxys](#)

Yield	Conditions & References
	<p>With aluminum oxide, ammonia</p> <p>Schuiкин; Balandin; Plotkin; Zhurnal Obshchei Khimii; vol. 4; (1934); p. 1444; Journal of Physical Chemistry; vol. 39; (1935); p. 1201; Chem. Zentralbl.; vol. 107; nb. II; (1936); p. 1324 View in Reaxys</p>
	<p>With ammonia, stannous oxide, T= 300 - 400 °C</p> <p>Schuiкин; Balandin; Plotkin; Zhurnal Obshchei Khimii; vol. 4; (1934); p. 1444; Journal of Physical Chemistry; vol. 39; (1935); p. 1201; Chem. Zentralbl.; vol. 107; nb. II; (1936); p. 1324 View in Reaxys</p>
	<p>With monoaluminum phosphate, ammonia, T= 250 - 500 °C</p> <p>Patent; Roehm and Haas; FR734404 View in Reaxys</p>
	<p>With ammonia, nickel, T= 180 - 200 °C</p> <p>Patent; Comp. d'Alais; DE588648; (1929); Fortschr. Teerfarbenfabr. Verw. Industriezweige; vol. 20; p. 341 View in Reaxys</p>
	<p>With ammonia, hydrogen, nickel, T= 180 - 200 °C</p> <p>Patent; Sharples Chem. Inc.; US2365721; (1941) View in Reaxys</p>
	<p>With water, ammonium chloride, T= 310 - 350 °C</p> <p>Morgan; Pratt; Journal of the Society of Chemical Industry, London; vol. 51; (1932); p. 283 T View in Reaxys</p> <p>Patent; Celanese Corp. Am.; US2226635; (1938) View in Reaxys</p>
	<p>With aluminum oxide, ammonia</p> <p>Kodama et al.; Kogyo Kagaku Zasshi; vol. 52; (1949); p. 112; Chem.Abstr.; (1951); p. 4644 View in Reaxys</p>
	<p>With barium hydroxide treated copper-aluminium-alloy, ammonia, T= 260 °C , p= 12503.6Torr</p> <p>Patent; ICI; US2609394; (1949); DRP/DRBP Org.Chem. View in Reaxys</p> <p>Patent; ICI; DE881657; (1950) View in Reaxys</p>
	<p>With alkaline solution and aqueous barium hydroxide pretreated nickel-aluminium-alloy, ammonia, T= 195 °C , p= 13239.1Torr</p> <p>Patent; ICI; US2636902; (1949); DRP/DRBP Org.Chem. View in Reaxys</p> <p>Patent; ICI; DE890646; (1950) View in Reaxys</p>
	<p>With platinum on silica, ammonia, T= 400 °C</p> <p>Popow; Schuiкин; Izvestiya Akademii Nauk SSSR, Seriya Khimicheskaya; (1955); p. 308,311; Chem.Abstr.; nb. 4769; (1956) View in Reaxys</p>
	<p>With ammonium chloride, T= 300 - 400 °C</p> <p>Weith; Chemische Berichte; vol. 8; (1875); p. 458</p>

View in Reaxys Berthelot ; Annales de Chimie (Cachan, France); vol. <3>38; (1853); p. 69; Jahresbericht ueber die Fortschritte der Chemie und Verwandter Theile Anderer Wissenschaften; (1852); p. 551 View in Reaxys
With ammonia, nickel, T= 190 °C Guyot; Fournier ; Bulletin de la Societe Chimique de France; vol. <4>47; (1930); p. 203,207 View in Reaxys
With aluminum oxide, ammonia, T= 330 - 350 °C Smolenski,E.; Smolenski,K. ; Roczniki Chemii; vol. 1; p. 236; Chem. Zentralbl.; vol. 94; nb. III; (1923); p. 204 View in Reaxys
With kaolin, ammonia, T= 330 - 350 °C Dorrell ; Journal of the Chemical Society; vol. 127; (1925); p. 2404 View in Reaxys
With ammonia, silica gel, T= 456 °C Brown; Reid ; Journal of Physical Chemistry; vol. 28; (1924); p. 1075 View in Reaxys
With ammonia, ueber Mischkatalysatoren von Al ₂ O ₃ mit Fe ₂ O ₃ , ZnO, Cr ₂ O ₃ SchuiKin; Balandin; Plotkin ; Zhurnal Obshchei Khimii; vol. 4; (1934); p. 1444; Journal of Physical Chemistry; vol. 39; (1935); p. 1201; Chem. Zentralbl.; vol. 107; nb. II; (1936); p. 1324 View in Reaxys
With ammonia, carbon, T= 450 °C Popow; SchuiKin ; Izvestiya Akademii Nauk SSSR, Seriya Khimicheskaya; (1955); p. 308,311; Chem.Abstr.; nb. 4769; (1956) View in Reaxys


 Rx-ID: 5090516 [View in Reaxys](#)

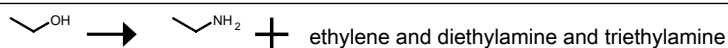
Yield	Conditions & References
	With aluminum oxide, ammonia, silica gel, T= 299.85 °C , var. catalyst, Product distribution, Mechanism Veeffkind, Victor A.; Lercher, Johannes A. ; Journal of Catalysis; vol. 180; nb. 2; (1998); p. 258 - 269 View in Reaxys
	Example Name I With dimethylsulfide, 3-(methylsulphonyl)-1-propanol, ammonia, 5percent Pd-C, T= 150 - 250 °C , p= 45004.5Torr Page/Page column 16 Patent: BASF AKTIENGESELLSCHAFT ; WO2005/63681; (2005); (A1) German View in Reaxys
	With ammonia, CuO-CoO-NiO/Al ₂ O ₃ catalyst, T= 195 - 227 °C , p= 49505Torr , Industry scale, Product distribution / selectivityPage/Page column 13-14 Patent: BASF AKTIENGESELLSCHAFT ; WO2006/97468; (2006); (A1) German View in Reaxys
	With ammonia, CuO-CoO-NiO/ZrO ₂ catalyst, T= 175 °C , p= 49505Torr , Industry scale, Product distribution / selectivityPage/Page column 13-14 Patent: BASF AKTIENGESELLSCHAFT ; WO2006/97468; (2006); (A1) German

[View in Reaxys](#)

 Rx-ID: 26363762 [View in Reaxys](#)

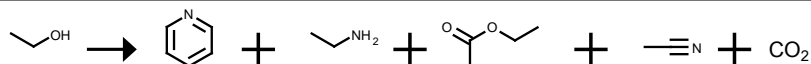
Yield	Conditions & References
	<p>in neat (no solvent), passing ethanol vapour over (PN₂H)_n at 150-200.deg.C; formation of ethylammoniummetaphosphate and (C₂H₅)₂NH;</p> <p>Vidal, H. R.; Comptes Rendus Hebdomadaires des Seances de l'Academie des Sciences; vol. 112; (1891); p. 950 - 951 View in Reaxys</p> <p>Vidal, H. R.; Comptes Rendus Hebdomadaires des Seances de l'Academie des Sciences; vol. 115; (1892); p. 123 - 124 View in Reaxys</p> <p>vol. P: MVol.C; 139, page 321 - 322 View in Reaxys</p> <p>Patent; Vidal, H. R.; DE101391; (1899) View in Reaxys</p> <p>Patent; Vidal, H. R.; DE64346; (1892) ; (from Gmelin) View in Reaxys</p>


 Rx-ID: 6212858 [View in Reaxys](#)

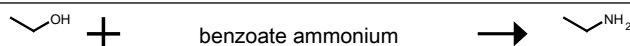
Yield	Conditions & References
	<p>With ammonia, copper, T= 340 °C , zuletzt (nach Abtrennung des entstandenen Wassers) bei 170grad</p> <p>Patent; Soc. An. Usines de Melle; FR798530; (1935) View in Reaxys</p> <p>Patent; Soc. An. Usines de Melle; DE650433; (1936); Fortschr. Teerfarbenfabr. Verw. Industriezweige; vol. 24; p. 132 View in Reaxys</p>


 Rx-ID: 6213642 [View in Reaxys](#)

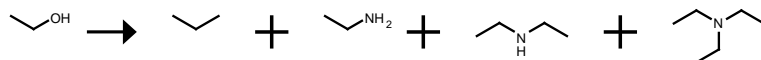
Yield	Conditions & References
	<p>With ammonium chlorozincate, T= 260 °C</p> <p>Merz; Gasirowski; Chemische Berichte; vol. 17; (1884); p. 637 View in Reaxys</p>


 Rx-ID: 5728226 [View in Reaxys](#)

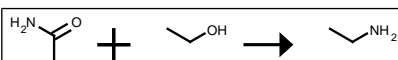
Yield	Conditions & References
	<p>With air, zeolite H-Nu-10, ammonia, Time= 18h, T= 350 °C , Further byproducts given</p> <p>Febre, R. A. le; Hoefnagel, A. J.; Bekkum, H. van; Recueil des Travaux Chimiques des Pays-Bas; vol. 115; (1996); p. 511 - 518 View in Reaxys</p>


 Rx-ID: 5852872 [View in Reaxys](#)

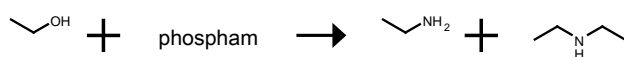
Yield	Conditions & References
	Baubigny ; Comptes Rendus Hebdomadaires des Seances de l'Academie des Sciences; vol. 95; (1882); p. 646 View in Reaxys Seifert ; Chemische Berichte; vol. 18; (1885); p. 1358 View in Reaxys


 Rx-ID: 25923979 [View in Reaxys](#)

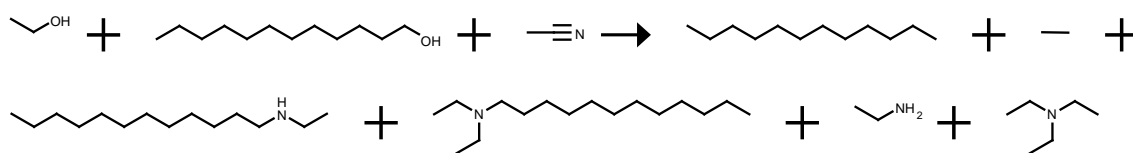
Yield	Conditions & References
	With ammonia, hydrogen, carbon monoxide, silica gel, T= 210 °C , Product distribution, Further Variations: Catalysts, Temperatures Rausch, A. K.; van Steen, E.; Roessner, F. ; Journal of Catalysis; vol. 253; nb. 1; (2008); p. 111 - 118 View in Reaxys


 Rx-ID: 38582 [View in Reaxys](#)

Yield	Conditions & References
	Baubigny ; Comptes Rendus Hebdomadaires des Seances de l'Academie des Sciences; vol. 95; (1882); p. 646 View in Reaxys Seifert ; Chemische Berichte; vol. 18; (1885); p. 1358 View in Reaxys


 Rx-ID: 5929011 [View in Reaxys](#)

Yield	Conditions & References
	T= 225 °C , unter Druck Patent; Vidal ; DE64346; Fortschr. Teerfarbenfabr. Verw. Industriezweige; vol. 3; p. 13 View in Reaxys Vidal ; Comptes Rendus Hebdomadaires des Seances de l'Academie des Sciences; vol. 112; (1891); p. 950 View in Reaxys


 Rx-ID: 5111965 [View in Reaxys](#)

Yield	Conditions & References
30 %, 15 % %, 50 %	With hydrogen, aluminum oxide, copper, T= 240 °C , p= 7600Torr , other catalyst and composition, Product distribution Kozlov, N. G.; Tereshko, A. B.; Basalaeva, L. I.; Tarasevich, V. A. ; Russian Journal of General Chemistry; vol. 68; nb. 7; (1998); p. 1095 - 1098; Zhurnal Obshchei Khimii; vol. 68; nb. 7; (1998); p. 1148 - 1151 View in Reaxys


 Rx-ID: 6681447 [View in Reaxys](#)

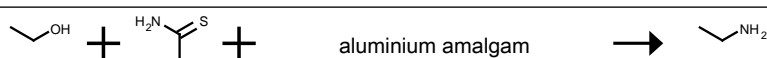
Yield	Conditions & References
	Hydrogenation

Samuelsen et al.; Journal of the American Chemical Society; **vol.** 72; (1950); p. 3872

[View in Reaxys](#)

Levering et al.; Journal of the American Chemical Society; **vol.** 72; (1950); p. 1190,1191

[View in Reaxys](#)



Rx-ID: 5852871 [View in Reaxys](#)

Yield Conditions & References

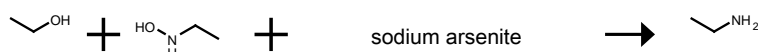
T= 60 - 70 °C

Patent; Kindler; DE360456; Fortschr. Teerfarbenfabr. Verw. Industriezweige; **vol.** 14; p. 344

[View in Reaxys](#)

Kindler; Dehn; Chemische Berichte; **vol.** 54; (1921); p. 1081

[View in Reaxys](#)

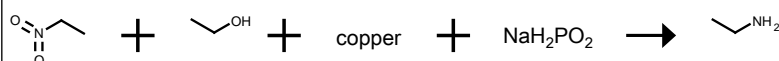


Rx-ID: 5852888 [View in Reaxys](#)

Yield Conditions & References

Gutmann; Chemische Berichte; **vol.** 55; (1922); p. 3011; Fresenius' Zeitschrift fuer Analytische Chemie; **vol.** 66; (1925); p. 233

[View in Reaxys](#)

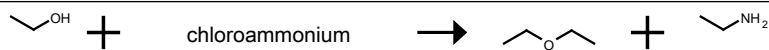


Rx-ID: 6681446 [View in Reaxys](#)

Yield Conditions & References

Mailhe; Murat; Bulletin de la Societe Chimique de France; **vol.** <4>7; (1910); p. 955

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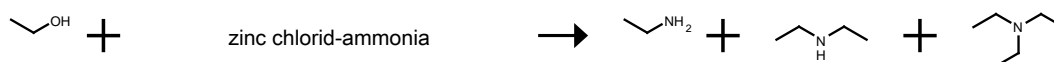
Rx-ID: 7057675 [View in Reaxys](#)

Yield Conditions & References

T= 260 - 400 °C

Berthelot; Justus Liebigs Annalen der Chemie; **vol.** 83; (1852); p. 110

[View in Reaxys](#)



Rx-ID: 7061119 [View in Reaxys](#)

Yield Conditions & References

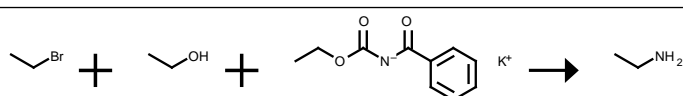
T= 260 °C

Merz; Gasiorowski; Chemische Berichte; **vol.** 17; (1884); p. 637

[View in Reaxys](#)

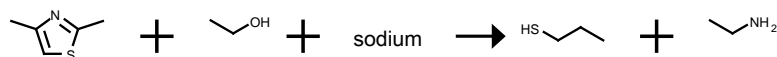
Berthelot; Justus Liebigs Annalen der Chemie; **vol.** 83; (1852); p. 110

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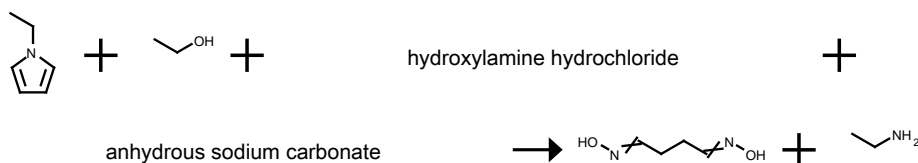


Rx-ID: 92754 [View in Reaxys](#)

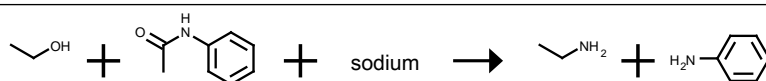
Yield	Conditions & References
	Loessner ; Journal fuer Praktische Chemie (Leipzig); vol. <2> 10; (1874); p. 254 View in Reaxys


 Rx-ID: 5678293 [View in Reaxys](#)

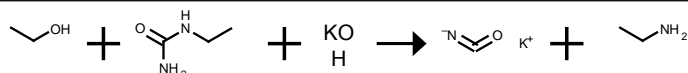
Yield	Conditions & References
	Schatzmann ; Justus Liebigs Annalen der Chemie; vol. 261; (1891); p. 19 View in Reaxys


 Rx-ID: 5678294 [View in Reaxys](#)

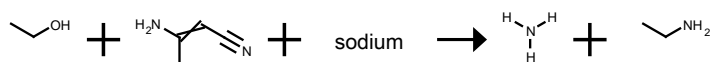
Yield	Conditions & References
	Ciamician ; Zanetti ; Chemische Berichte; vol. 23; (1890); p. 1788; Gazzetta Chimica Italiana; vol. 21 I; (1891); p. 238 View in Reaxys


 Rx-ID: 5930037 [View in Reaxys](#)

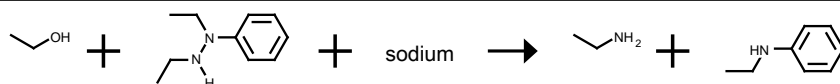
Yield	Conditions & References
	T= 170 - 200 °C , im geschlossenen Rohr Seifert ; Chemische Berichte; vol. 18; (1885); p. 1358 View in Reaxys


 Rx-ID: 7057693 [View in Reaxys](#)

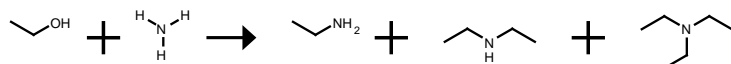
Yield	Conditions & References
	Haller ; Annales de Chimie (Cachan, France); vol. <6>9; (1886); p. 278 View in Reaxys


 Rx-ID: 7057695 [View in Reaxys](#)

Yield	Conditions & References
	stable form Holtzwardt ; Journal fuer Praktische Chemie (Leipzig); vol. <2> 39; (1889); p. 239 View in Reaxys


 Rx-ID: 7059525 [View in Reaxys](#)

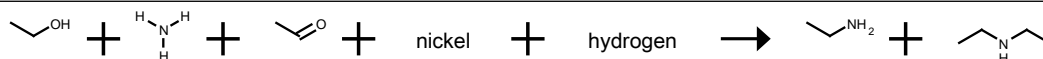
Yield	Conditions & References
	Bamberger ; Tichvinsky ; Chemische Berichte; vol. 35; (1902); p. 4179,4187 View in Reaxys


 Rx-ID: 7061110 [View in Reaxys](#)

Yield Conditions & References

 T= 300 - 400 °C , Leiten ueber Al₂O₃ und Mischkatalysatoren aus Fe₂O₃, ZnO, Cr₂O₃ oder SnO und Al₂O₃
Schuiкин; Balandin; Plotkin; Zhurnal Obshchei Khimii; **vol.** 4; (1934); p. 1444; Journal of Physical Chemistry; **vol.** 39; (1935); p. 1201; Chem. Zentralbl.; **vol.** 107; nb. II; (1936); p. 1324

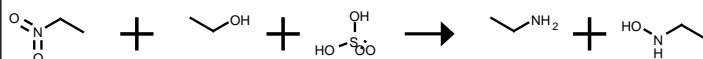
[View in Reaxys](#)
Schuiкин; Balandin; Plotkin; Journal of Physical Chemistry; **vol.** 39; (1935); p. 1201

[View in Reaxys](#)

 Rx-ID: 5929009 [View in Reaxys](#)

Yield Conditions & References

T= 15 - 20 °C , unter Atmospheredruck

Mignonac; Comptes Rendus Hebdomadaires des Seances de l'Academie des Sciences; **vol.** 172; (1921); p. 226

[View in Reaxys](#)

 Rx-ID: 6684134 [View in Reaxys](#)

Yield Conditions & References

durch elektrolytische Reduktion

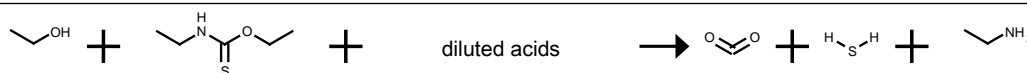
Pierron; Bulletin de la Societe Chimique de France; **vol.** <3>21; (1899); p. 783

[View in Reaxys](#)

 Rx-ID: 7057690 [View in Reaxys](#)

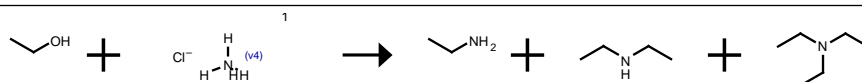
Yield Conditions & References

Hofmann, A. W.; Chemische Berichte; **vol.** 2; (1869); p. 117

[View in Reaxys](#)

 Rx-ID: 7057691 [View in Reaxys](#)

Yield Conditions & References

Hofmann, A. W.; Chemische Berichte; **vol.** 2; (1869); p. 117

[View in Reaxys](#)

 Rx-ID: 7061108 [View in Reaxys](#)

Yield Conditions & References

T= 350 - 360 °C

Morgan; Pratt; Journal of the Society of Chemical Industry, London; **vol.** 51; (1932); p. 283 T

[View in Reaxys](#)

