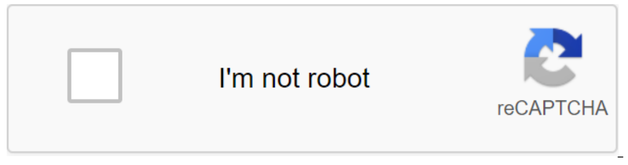

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Methylamine solubility in hexane

From Sciencemadness Wiki, methylamine or methaneamine is a colorless gas with a strong fishy smell, having the ch3NH2 formula (sometimes shortened to MeNH2). It's an organic compound, the simplest primary amin. The properties of the chemical methylamine reacts with acids to form methylammonia salts, such as methylammonia chloride (or methylamine hydrochloride): CH3NH2 and HCl CH3NHCl3 Physical methylamine is a colorless gas heavier than air with a strong fish-like odor. It is very soluble in water and various organic solvents. The presence of methylamine is sold by various chemical suppliers, either as compressed gas in tanks or as salt, solid or solution. Legality In the U.S., methylamine and its SALT DEA List I chemicals, due to their use in the production of methamphetamine, and as such cannot be purchased freely. Many other countries have similar restrictions. Preparation There are several routes to methylamine. The industrial process involves the reaction of methanol with ammonia anhydrous, in the presence of a drying catalyst such as silica gel or a more effective, zeolite-based catalyst. The reaction occurs at high temperatures, and dimethylamine and trimethylamine are also produced as by-products with the latter being the most favored reaction of kinetics. Methylamine can be extracted from the mixture either through fractional distillation or other convenient methods. The most convenient route is the refluxing of the formaldehyde and ammonium chloride mixture, at 104 degrees Celsius NH4Cl and 2 H2CO HCl and HCOOH Both reagents are readily available in most places, and the final product of the methylammony chloride reaction, which is solid and volatile, making the reaction safe. However, the extraction of methylamine hydrochloride from the product is frustrating, although it is quite possible. To obtain free methylamine, MeNH2 HCl reacts with a base such as sodium hydroxide. Hofmann permutation of acetamide (from dehydrated ammonium acetate) will give methylamine. Hydrolysis of methyl isocyanate will also give methylamine. However, the precursor is very toxic, which makes the reaction dangerous and impractical. Another route involves reducing nitrometan with h/HCl. Refluxing sulphamic acid with methanol for several hours gives ammonium methyl sulfate, which is rebuilt at high temperature to form methylamine sulfate. H2NSO3H - CH3SO4NH4 CH3SO4NH4 HSO4 Projects Make methylamommia halida Make methylammonia nitrate Make perchlorate methylamoria Make Metol Methylamine Safety Treatment Toxic and Proper Protection Should Be Worn When Processing Product. Storage of methylamine is best stored in the form of salt. Methylamine anhydrous can be stored in compressed cylinders. The disposal of methylamine salts does not pose a major risk to the environment and (both Doesn't require special special Links Appropriate Sciencemadness Filath methylamine Good Way methylamine HCl? Methylamine problem FriendlyFinger (Hive Bee) 03-29-03 04:12 No 422152 Methylamine.HCl solubility Bookmark Hi there, Swim can only get Approx 35-40g methylamine hydrochloride to dissolve in 1L Bhutanola with the help of a boiling water bath. Does that sound right to you? If so, what a hassle if you have a kilo to clean! Respectfully, FF Abacus (Hive Bee) 03-29-03 06:03 No 422170 try methanol bookmark to use methanol or ethanol, much less alcohol is required. Searching the post chromic re is UTFSE FriendlyFinger (Hive Bee) 04-01-03 01:23 No 422879 good link, thanks to the tab Chromic mentions giving MeOH cool slowly for higher purity crystals. Is the same thing true for Butanol or does it really make any difference because it doesn't dissolve a lot of Am.Cl? Besides, how about washing with acetone. Rodium tells me that it reacts to the formation of the imina, but Chromic says it is reversible. Thanks.FF. Chromic (Synaptic Self-Mutilator) 04-01-03 06:30 No 422944 I mines Bookmark I do not see how, mechanistically, protonated amine will form a mina... I mean, Amin will want to stay protoned... Rodi (Chief Bee) 04-01-03 13:33 No 422991 acetone and amine bookmark It is sure reversible and it will not react to a noticeable degree, but the risk is always present until someone has proved otherwise. I would not personally use acetone to wash any amines. Rodi (chief bee) 04-02-03 13:06 No 423303 Nice to hear the tab of Lee amin salt prepared in this fashion store well, ie not discoloration or anything like that in a few months? Hive Addict) 04-02-03 15:22 No 423315 How about gasification of the mixture, say 50/50 ... Bookmark How about a gasification mixture of, say, 50/50 acetone/toluene. This will solve the problems that may arise with the minscule percentage of water present in the solvent and the washing out will be prevented. I'm sure the magnesium sulfate is not soluble in acetone, so the ace/tol mixture should be easily dry For those who are about to synth, we welcome you to the abacus (Hive Bee) 04-07-03 12:40 No 424521 Rhodium Bookmark I know it's a cross floss, but the answer is 1. Acetone turned out to be an excellent gas solvent, as I mentioned earlier. No discoloration after at least 1 year Of The Air Addict 04-13-03 09:09 No 426229 As I said, methylamine. HCl can be... The bookmark, as I said, is methylamine. HCl can be washed with acetone with good results (ace removes that greenish tone of raw methylamine. HCl has). For those who are about to synthesizer, we welcome you Chromic (Synaptic Self-Mutilator) 04-13-03 13:11 No 426254 Butanol Laying Isopropanol and Butanol suck to prepare large amounts of hydrochloride methylamine (but work well for high purity crystals), and, as other members said, search my messages about using methanol to re-crystallize methylamine. And to answer Rodia's question regarding methylamine (rather than MDMA), the crystals are still nice and white (I'd post rice of some crystals I prepared a long time ago, but I don't know how) I've noticed that my MDMA discoloration over time. I don't know what's causing it, but I doubt it's washing acetone. raffike (Hive Addict) 04-13-03 13:13 No 426255 Read faq:-) Bookmark Read faq For those who are about to synthesizer, we welcome you FriendlyFinger (Hive Bee) 04-16-03 11:02 No 427210 Talking about that green/yellow tone, how did ... The bookmark I saw on Chromic is good. I think I'll try MeOH next time. It will take about one litre to water about 40g Of MeNH2. although I would rather have cleaner crystals. Respectfully, FF. Regards,FF Methylamine Names Preferred IUPAC name methaneamine (1) Other names AminomethanMonometylamine ID CAS Number 74-89-5 Y 3D Model (JSmol) Interactive image 3DMet B00060 Reduction MMA Beilstein Help 741851 CHEBI CHEBI:168 N ChEMBL ChEMBL43280 Y ChemSpider 6089 Y DrugBank DB01828 N ECHA InfoCard 100.000.746 EC Number 200-820-0 Gmelin Reference 145 KEGG C00218 Y Me MSH Met2 6329 RTECS Room PF6300000 UNII BSF23SJ79E Y UN Number 1061 CompTox Dashboard (EPA) DTXSID707025683 InChI InChI=1S/CH5N/c1-2H2.1H3 YKey : BVISALUKSF UGHV-UFFFAOSA-N Y SMILES CN Properties Chemical Formula CH5N Molar mass 31,058 g.m.mole-1 Appearance of colorless Odor Fishi gas, ammonia density 656.2 kg m-3 (at 25 degrees Celsius) Melting point 135.58 euros Fahrenheit; 180.05 K Boiling point from 6.6 to 6.0 degrees Celsius; 20.0 to 21.1 degrees Fahrenheit; 266.5 to 267.1 K Solubility in water 1.008 g.L−1 (at 20 °C) log P −0.472 Vapor pressure 186.10 kPa (at 20 °C) Henry's lawconstant (kH) 1.4 mmol Pa−1 kg−1 Basicity (pKb) 3.36 Conjugate acid CH3NH3+ (Methylammonium ion) Magnetic susceptibility (χ) -27.0·10−6 cm3/mol Viscosity 230 µPa s (at 0 °C) Dipole moment 1.31 D Thermochemistry Std enthalpy offormation (ΔfH⦵298) −23.5 kJ mol−1 Hazards Safety data sheet emdchemicals.com GHS pictograms GHS Signal word Danger GHS hazard statements H220, H315, H318, H332, H335 GHS precautionary statements P210, P261, P280, P305+351+338, P410+403 NFPA 704 (fire diamond) 4 3 0 Flash point −10 °C; 14 degrees Fahrenheit; 263 K (liquid, gas extremely flammable) - Autoignitiontemperature 430 C (806 F; 703 K) Explosive limits 4.9-20.7% Lethal dose or concentration (LD, LC): LD50 (medium dose) 100 mg kg No1 (oral, oral, LC): (average dose) 100 mg kg kg LC50 (average concentration) 1860 ppm (mouse, 2 hours) NIOSH (U.S. Health Impact Restrictions): PEL (permissible) TWA 10 ppm (12 mg/m3) (Recommended) TWA 10 ppm (12 mg/m3) trimethylamine-related ammonia compounds Except when otherwise noted, the data are given for materials in their standard condition (at 25 degrees Celsius, 100 kp). N check (what is YN?) Infobox links methylamine is an organic compound with the CH3NH2 formula. This colorless gas is a derivative of ammonia, but with one hydrogen atom is replaced by a methyl group. This is the simplest primary amin. It is sold as a solution in methanol, ethanol, tetrahydrofuran or water, or as anhydrogenic gas in metal pressure containers. Industrial methylamine is transported in anhydrouse form in airtight cars and tanks. It has a strong smell similar to a fish. Methylamine is used as a building block for the synthesis of many other commercially available compounds. Industrial production of methylamine is prepared on a commercial basis by the reaction of ammonia with methanol in the presence of a clay-acid catalyst. Dimethylamin and trimethylamine are co-producers; kinetic reactions and reaction rates determine the ratio of the three products. The product is the most favored reaction of kinetics trimethylamine. Thus, 115,000 tons of CH3OH and NH3NH2 were produced in 2005. Laboratory methods of methylamine were first prepared in 1849 by Karl-Adolf Wurts using hydrolysis methyl isocyanate and related compounds. An example of this process is the use of Hoffman's permutation to produce methylamine from acetamide and bromine. In the laboratory, methylamine hydrochloride is easily prepared by various other methods. One method involves the treatment of formaldehyde with ammonium chloride. NH4Cl and H2CO (CH2)NH2'Cl, H2O (CH2)NH2'Cl, H2CO, H2O, CH3NH3'Cl, HCO2H Colorless Hydrochloride Salt can be converted into amine adding a strong base, such as sodium hydroxide (NaOH): CH3NH3Cl and NaOH CH3NH2 NaCl H2O Another method entails a reduction of nitrometan with zinc and hydroic acid. Another method of methylamine production is spontaneous decarboxyl glycine with a strong base in the water. (quote is necessary) Reactivity and the use of methylamine is a good nucleophil, as it is an unimpeded amin. As a amin it is considered a weak base. Its use in organic chemistry is widespread. Some reactions involving simple reagents include: methyl isocyanate phosgene, carbon dysulfide and sodium hydroxide to methyldithocarbamate, with chloroform and base for methyl isocyanide and with ethylene oxide to methylethanolamoma. Liquid methylamine has a solvent similar to liquid ammonia. Representative of commercially significant chemicals produced from methylamine include pharmaceuticals ephedrine and theophylline, pesticides carbofuran, carbaryl and metam sodium, as well as solvents N-methylformamide and N-methylpyrrolidone. The preparation of some surfactants and photographic developers requires methylamine as a building block. The biological chemistry of methylamine occurs as a result of putrefaction and is a substrate for methanogenesis. In addition, methylamine is produced by the demethylation of PADI4 ARGININ. The Safety of LD50 (mouse, s.c.) is 2.5 g/kg. Occupational Health and Safety (OSHA) and the National Institute for Occupational Health and Safety (NIOSH) have set a production impact limit of 10 ppm or 12 mg/m3 during the eight-hour weighted average. Regulation in the United States, methylamine is controlled as a precursor chemical list 1 by the Drug Enforcement Administration because of its use in the illegal production of methamphetamine. In popular culture, fictional characters Walter White and Jesse Pinkman use methylamine to make methamphetamine in the AMC Breaking Bad series. Its use is central to the storyline as an alternative to traditional methods of methamphetamine production, which include pseudoephedrine, cold medicines. Cm. also Methylammonium Halid Links - Nomenclature of Organic Chemistry: IUPAC Recommendations and Preferred Names 2013 (Blue Book). Cambridge: Royal Chemical Society. 2014. page 670. doi:10.1039/9781849733069-00648. ISBN 978-0-85404-182-4. - b c d e NIOSH Pocket Guide on Chemical Hazards. #0398. 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Retrieved from 2 1,3,5-Trithiane Names IUPAC name 1,3,5-Trithiane Other names Thioformaldehyde trimer, Trimethylentrisulfide, Trimethylene trisulfide, Trithioformaldehyde, 1,3,5-Trithiacyclohexane, sym-Trithiane, Thioform, s-Trithiane Identifiers CAS Number 291-21-4 N 3D model (JSmol) Interactive image ChEBI CHEBI:39196 Y ChemSpider 8907 Y ECHA InfoCard 100.005.482 EC Number 206-029-7 PubChem CID 9264 CompTox Dashboard (EPA) DTXSID2059778 InChI InChI=1S/C3H6S3/c1-4-2-6-3-5-1/h1-3H2 YKey: LORRLQMLLQLPSJ-UHFFFAOYSA-N YInChI=1/C3H6S3/c1-4-2-6-3-5-1/h1-3H2Key: LORRLQMLLQLPSJ-UHFFFAOYAA SMILES S1CSCSC1 Properties Chemical formula C3H6S3 Molar mass 138.27 Appearance Colourless solid Density 1.6374 g/cm3[1] Melting point 215 to 220 °C (419 to 428 °F; 488 to 493 K) Solubility in water Slightly soluble Solubility Benzene Hazards Main hazards Toxic (T) GHS pictograms GHS Signal word Warning GHS hazard statements H319 GHS precautionary statements P264 , P280, P305-351-338, P313 NFPA 704 (fire diamond) 1 1 0 Except when otherwise noted, data are given for materials in their standard condition (at 25 degrees Celsius, 100 kPa). N check (what is YN?) Infobox links 1.3.5-Trithiane is a chemical compound with the formula (CH2S)3. This heterocycle is a cyclical trimer of an otherwise unstable species of thioformaldehyde. It consists of six ring members with alternating methylene bridges and thioether groups. He's getting ready. treatment of formaldehyde with Sulfide. Tritian is a molecule of the building block in organic synthesis, being a disguised source of formaldehyde. In one application, it is deprotoned with organolite reagents to give a derivative of lithium that can be alkalatized. (CH2S)3 (RLi) 2 (CHLiS) - RH (CH2S)2 (CHLiS) Tritian is a dithioacetal formaldehyde. Other dithioacetals undergo a similar reaction to the above. It is also a precursor to other organosulfur reagents. For example, chlorination in the presence of water gives chlorometylsulfonylchloride: Trithianes Trithiane is the parent of a class of heterocycles called tritians, which are formally the result of replacing different monovalent groups with one or more hydrogen atoms. Species often arise from thial ketones and aldehydes. Emerging thiocetons and thioaldehids undergo trimmerization. One example is 2,2,4,4,6,6-hexamethyl-1,3,5-tritian, or tritioacetone, trister thioacetoneton (propane-2-tion). Alternatively 1.3,5-trithiane can be deprotonated and alkylated to allow (SCH2)n (SCHR)3-n. References : David R. Leed, Ed. Manual of Chemistry and Physics, 85th edition, Internet version 2005. CRC Press, 2005. Bost, R.V.; Constable, E. W. sym-Trithiane Organic Synthesises, Volume 2 collected, p.610 (1943). and Seebach, D.; Beck, A.K. 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