

**We Claim,**

1. The process for preparation of DL-Homocysteine thiolactone hydrochloride with high purity comprising the steps of;
  - a. Demethylating DL-methionine with sodium-liq  $\text{NH}_3$  followed by addition of C1-C4 alcohol to obtain reaction mixture containing disodium salt of DL-homocysteine, sodium methoxide and sodium amide,
  - b. treating the mixture of disodium salt of DL-Homocysteine, sodium methoxide and sodium amide of step (a) with DM water to get clear solution with simultaneous removal of ammonia,
  - c. Treating the clear solution obtained in step (b) with concentrated hydrochloric acid at reflux to obtain DL-Homocysteine thiolactone hydrochloride,
  - d. Distilling out excess water and hydrochloric acid from reaction mixture of DL-Homocysteine thiolactone hydrochloride obtained in step (c), using aromatic hydrocarbons or its derivatives at 100-110°C, and
  - e. precipitating sodium chloride impurity formed in step (c) by heating with phase transfer catalyst in aqueous alcoholic solvent followed by cooling the filtrate to obtain DL-Homocysteine thiolactone hydrochloride
2. The process as claimed in claim 1, wherein the phase transfer catalyst in step (e) is selected from quaternary ammonium salts, phosphonium salts such as Tetrabutylammonium bromide (TBAB), Hexadecyltrimethylammonium bromide, Tetraethylammonium chloride hydrate, Tributylhexadecylphosphonium bromide, Tetrabutylphosphonium chloride, Tetrahexylammonium hydrogensulfate, Tetrabutylammonium hydroxide, Tetraphenylphosphonium chloride, Tetrabutylammonium nonafluorobutanesulfonate, Tetrabutylammonium heptafluorooctanesulfonate and Tetraethylammonium chloride hydrate.
3. The process as claimed in claim 1 & 2, wherein the phase transfer catalyst employed is Tetrabutylammonium bromide (TBAB).
4. The process as claimed in claim 1, wherein the alcohol for step (e) is selected from C1-C4.
5. The process as claimed in claim 1, wherein the percentage range of aqueous alcoholic solvent is 1-40%.

6. The process as claimed in claim 1, wherein aromatic hydrocarbons or its derivatives is selected from, benzene, toluene and xylene.
7. The process as claimed in claim 1, wherein sodium chloride content in DL-Homocysteine thiolactone hydrochloride is less than 0.1%

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