

## ANNEX

DETERMINATION OF DICHLOROMETHANE AND 1,1,1-TRICHLOROETHANE  
IDENTIFICATION AND DETERMINATION OF MERCAPTOACETIC ACID IN HAIR-  
WAVING, HAIR-STRAIGHTENING AND DEPILATORY PRODUCTS

## 4. IDENTIFICATION

## 4.2. Identification by thin-layer chromatography

4.2.1. *Reagents*

All reagents, except where otherwise stated, should be of analytical purity.

4.2.1.1. Mercaptoacetic acid (thioglycolic acid), 98 % minimum purity assayed by iodometry.

4.2.1.2. 2,2'-dithiodi(acetic acid), 99 % minimum purity assayed by iodometry.

4.2.1.3. 2-mercaptopropionic acid (thiolactic acid), 95 % minimum purity assayed by iodometry.

4.2.1.4. 3-mercaptopropionic acid, 98 % minimum purity assayed by iodometry.

4.2.1.5. 3-mercaptopropane-1,2-diol (1-thioglycerol), 98 % minimum purity assayed by iodometry.

4.2.1.6. Thin-layer plates, silica gel, ready prepared, 0,25 mm thickness.

4.2.1.7. Thin-layer plates, aluminium oxide, Merck F 254 E or equivalent.

4.2.1.8. Hydrochloric acid, concentrated,  $d_4^{20} = 1,19$  g/ml.

4.2.1.9. Ethyl acetate.

4.2.1.10. Chloroform.

4.2.1.11. Diisopropyl ether

4.2.1.12. Carbon tetrachloride.

4.2.1.13. Acetic acid, glacial.

4.2.1.14. Potassium iodide, 1 % (m/v) solution in water.

4.2.1.15. Platinum tetrachloride, 0,1 % (m/v) solution in water.

4.2.1.16. *Eluting solvents*

4.2.1.16.1 Ethyl acetate (4.2.1.9), chloroform (4.2.1.10), diisopropyl ether (4.2.1.11), acetic acid (4.2.1.13) (20: 20: 10: 10, by volume).

4.2.1.16.2 Chloroform (4.2.1.10), acetic acid (4.2.1.13) (90: 20, by volume).

4.2.1.17. *Detection reagents*

4.2.1.17.1 Mix, immediately before use, equal volumes of solution (4.2.1.14) and solution (4.2.1.15).

4.2.1.17.2 Bromine solution 5 % (m/v):

Dissolve 5 g of bromine in 100 ml of carbon tetrachloride (4.2.1.12).

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4.2.1.17.3 Fluorescein solution, 0,1 % (m/v):

Dissolve 100 mg of fluorescein in 100 ml of ethanol.

4.2.1.17.4 Hexaammonium heptamolybdate, 10 % (m/v) solution in water.

4.2.1.18. *Reference solutions*

4.2.1.18.1 Mercaptoacetic acid (4.2.1.1), 0,4 % (m/v) solution in water.

4.2.1.18.2 2,2'-dithiodi(acetic) acid (4.2.1.2), 0,4 % (m/v) solution in water.

4.2.1.18.3 2-mercaptopropionic acid (4.2.1.3), 0,4 % (m/v) solution in water.

4.2.1.18.4 3-mercaptopropionic acid (4.2.1.4), 0,4 % (m/v) solution in water.

4.2.1.18.5 3-mercaptopropane-1,2-diol (4.2.1.5), 0,4 % (m/v) solution in water.