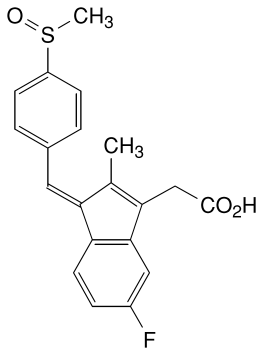
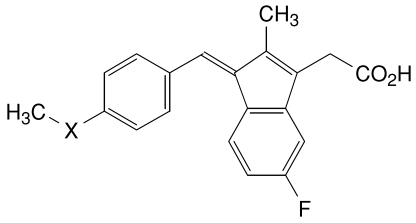


A. (*E*)-[5-fluoro-2-methyl-1-[4-(methylsulphinyl)benzylidene]-1*H*-inden-3-yl]acetic acid,



B. X = SO_2: (*Z*)-[5-fluoro-2-methyl-1-[4-(methylsulphonyl)-benzylidene]-1*H*-inden-3-yl]acetic acid,

C. X = S: (*Z*)-[5-fluoro-2-methyl-1-[4-methylsulphanyl)-benzylidene]-1*H*-inden-3-yl]acetic acid.

01/2008:0953

SULPHUR FOR EXTERNAL USE

Sulfur ad usum externum

S A_r 32.07
[7704-34-9]

DEFINITION

Content: 99.0 per cent to 101.0 per cent.

CHARACTERS

Appearance: yellow powder.

Solubility: practically insoluble in water, soluble in carbon disulphide, slightly soluble in vegetable oils.

mp: about 120 °C.

The size of most of the particles is not greater than 20 µm and that of almost all the particles is not greater than 40 µm.

IDENTIFICATION

A. Heated in the presence of air, it burns with a blue flame, emitting sulphur dioxide which changes the colour of moistened *blue litmus paper R* to red.

B. Heat 0.1 g with 0.5 ml of *bromine water R* until decolourised. Add 5 ml of *water R* and filter. The solution gives reaction (a) of sulphates (*2.3.1*).

TESTS

Solution S. To 5 g add 50 ml of *carbon dioxide-free water R* prepared from *distilled water R*. Allow to stand for 30 min with frequent shaking and filter.

Appearance of solution. Solution S is colourless (*2.2.2, Method II*).

Odour (*2.3.4*). It has no perceptible odour of hydrogen sulphide.

Acidity or alkalinity. To 5 ml of solution S add 0.1 ml of *phenolphthalein solution R1*. The solution is colourless. Add 0.2 ml of *0.01 M sodium hydroxide*. The solution is red. Add 0.3 ml of *0.01 M hydrochloric acid*. The solution is colourless. Add 0.15 ml of *methyl red solution R*. The solution is orange-red.

Chlorides (*2.4.4*): maximum 100 ppm.

Dilute 5 ml of solution S to 15 ml with *water R*.

Sulphates (*2.4.13*): maximum 100 ppm, determined on solution S.

Sulphides. To 10 ml of solution S add 2 ml of *buffer solution pH 3.5 R* and 1 ml of a freshly prepared 1.6 g/l solution of *lead nitrate R* in *carbon dioxide-free water R*. Shake. After 1 min any colour in the solution is not more intense than that in a reference solution prepared at the same time using 1 ml of *lead standard solution (10 ppm Pb) R*, 9 ml of *carbon dioxide-free water R*, 2 ml of *buffer solution pH 3.5 R* and 1.2 ml of *thioacetamide reagent R*.

Sulphated ash (*2.4.14*): maximum 0.2 per cent, determined on 1.0 g.

ASSAY

Carry out the oxygen-flask method (*2.5.10*), using 60.0 mg in a 1000 ml combustion flask. Absorb the combustion products in a mixture of 5 ml of *dilute hydrogen peroxide solution R* and 10 ml of *water R*. Heat to boiling, boil gently for 2 min and cool. Using 0.2 ml of *phenolphthalein solution R* as indicator, titrate with *0.1 M sodium hydroxide* until the colour changes from colourless to red. Carry out a blank titration under the same conditions.

1 ml of *0.1 M sodium hydroxide* is equivalent to 1.603 mg of S.

STORAGE

Protected from light.

01/2008:1572

SULPHURIC ACID

Acidum sulfuricum

H_2SO_4 M_r 98.1
[7664-93-9]

DEFINITION

Content: 95.0 per cent *m/m* to 100.5 per cent *m/m*.

CHARACTERS

Appearance: colourless, oily liquid, very hygroscopic.

Solubility: miscible with water and with ethanol (96 per cent) producing intense heat.

Relative density: about 1.84.

IDENTIFICATION

A. Carefully add 1 ml to 100 ml of *water R*. The solution is strongly acid (*2.2.4*).

B. The solution obtained in identification test A gives reaction (a) of sulphates (*2.3.1*).

TESTS

Appearance of solution. The solution is clear (*2.2.1*) and colourless (*2.2.2, Method II*).

Carefully pour, while cooling, 5 ml into 30 ml of *water R* and dilute to 50 ml with the same solvent.