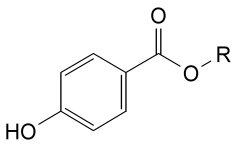
IMPURITIES



A. R = H: 4-hydroxybenzoic acid,

B. R = CH_3 : methyl 4-hydroxybenzoate,

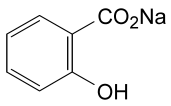
C. R = CH_2-CH_3: ethyl 4-hydroxybenzoate,

D. R = CH_2-CH_2-CH_2-CH_3: butyl 4-hydroxybenzoate.

01/2008:0413
corrected 6.0

SODIUM SALICYLATE

Natrii salicylas



$C_7H_5NaO_3$ M_r 160.1
[54-21-7]

DEFINITION

Sodium 2-hydroxybenzenecarboxylate.

Content: 99.0 per cent to 101.0 per cent (dried substance).

CHARACTERS

Appearance: white or almost white, crystalline powder or small, colourless crystals or shiny flakes.

Solubility: freely soluble in water, sparingly soluble in ethanol (96 per cent).

IDENTIFICATION

First identification: A, C.

Second identification: B, C.

A. Infrared absorption spectrophotometry (*2.2.24*).
Comparison: *sodium salicylate CRS.*

B. Solution S (see Tests) gives the reactions of salicylates (*2.3.1*).

C. It gives reaction (b) of sodium (*2.3.1*).

TESTS

Solution S. Dissolve 5.0 g in *carbon dioxide-free water R* prepared from *distilled water R* and dilute to 50 ml with the same solvent.

Appearance of solution. Solution S is clear (*2.2.1*) and not more intensely coloured than reference solution BY_6 (*2.2.2, Method II*).

Acidity. To 20 ml of solution S add 0.1 ml of *phenol red solution R*. The solution is yellow. Not more than 2.0 ml of *0.01 M sodium hydroxide* is required to change the colour of the indicator to violet-red.

Chlorides (*2.4.4*): maximum 200 ppm.

To 5 ml of solution S add 5 ml of *water R* and 10 ml of *dilute nitric acid R* and filter. Dilute 10 ml of the filtrate to 15 ml with *water R*.

Sulphates (*2.4.13*): maximum 600 ppm.

Dilute 2.5 ml of solution S to 15 ml with *distilled water R*.

Heavy metals (*2.4.8*): maximum 20 ppm.

Dissolve 1.6 g in 16 ml of a mixture of 5 volumes of *water R* and 10 volumes of *ethanol (96 per cent) R*. 12 ml of the solution complies with test B. Prepare the reference solution using lead standard solution (2 ppm Pb) obtained by diluting *lead standard solution (100 ppm Pb) R* with a mixture of 5 volumes of *water R* and 10 volumes of *ethanol (96 per cent) R*.

Loss on drying (*2.2.32*): maximum 0.5 per cent, determined on 1.00 g by drying in an oven at 105 °C.

ASSAY

Dissolve 0.130 g in 30 ml of *anhydrous acetic acid R*. Titrate with *0.1 M perchloric acid,* determining the end-point potentiometrically (*2.2.20*).

1 ml of *0.1 M perchloric acid* is equivalent to 16.01 mg of $C_7H_5NaO_3$.

STORAGE

In an airtight container, protected from light.

01/2008:1677

SODIUM SELENITE PENTAHYDRATE

Natrii selenis pentahydricus

$Na_2SeO_3,5H_2O$ M_r 263.0
[26970-82-1]

DEFINITION

Content: 98.5 per cent to 101.5 per cent.

CHARACTERS

Appearance: white or almost white, crystalline powder, hygroscopic.

Solubility: freely soluble in water, practically insoluble in ethanol (96 per cent).

IDENTIFICATION

A. Dissolve 50 mg in 5 ml of a mixture of equal volumes of *dilute hydrochloric acid R* and *water R* and heat to boiling. Add 0.05 g of *ascorbic acid R*; a red precipitate is formed which may become black.

B. Dissolve 50 mg in a mixture of 1 ml of *dilute hydrochloric acid R* and 5 ml of *water R*. Add 1 ml of *barium chloride solution R1*; the solution remains clear.

C. It gives reaction (a) of sodium (*2.3.1*).

D. It complies with the limits of the assay.

TESTS

Solution S. Dissolve 5.0 g in *carbon dioxide-free water R* and dilute to 50.0 ml with the same solvent.

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

pH (*2.2.3*): 9.8 to 10.8 for solution S.

Chlorides (*2.4.4*): maximum 50 ppm.

To 10 ml of solution S add 2 ml of *nitric acid R* and dilute to 15 ml with *water R*.