Approval/authorization for use of butylamine and phenetylamine as food additives

Purpose and background

This activity is to newly designate butylamine and phenetylamine as authorized food additives.

Under Article 10 of the Food Sanitation Law, food additives may be used or marketed only when they are authorized by the Minister of Health, Labour and Welfare. Where standards for use of additives and/or their compositional specifications are established based on Article 11 of the law, those additives may be used or marketed only when they meet the standards and/or specifications.

In response to a request from the Minister, the Subcommittee on Food Additives under the Food Sanitation Committee which is established under the Pharmaceutical Affairs and Food Sanitation Council has discussed the adequacy of designation of the two substances (phenethylamine, butylamine) as food additives. Conclusion of the subcommittee is outlined as below.

Outline of conclusion

The Minister should designate butylamine and phenethylamine, based on Article 10 of the Food Sanitation Law, as food additives unlikely to harm human health, and establish compositional specifications and other necessary standards for these substances, based on Article 11 of the law (see Attachments 1 and 2).

Attachment 1

Phenethylamine

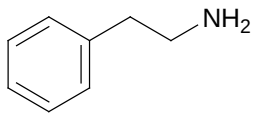
Standard for use

It shall not be used for purposes other than flavoring.

Compositional specifications

Name of the substance: Phenethylamine

Structural formula:



Molecular formula: $C_8H_{11}N$

Mol. Weight: 121.18

Chemical name [CAS number]: 2- Phenylethylamine [64-04-0]

Content: Phenethylamine contains not less than 95.0% of phenethylamine ($C_8H_{11}N$).

Description: Phenethylamine occurs as a colorless to light yellow, transparent liquid having a characteristic odor.

Identification: Determine the infrared absorption spectrum of Phenethylamine, as directed in the Liquid Film Method under Infrared Spectrophotometry, and compare it with the Reference Spectrum. Both spectra exhibit absorptions having about the same intensity at the same wavenumbers.

Purity:

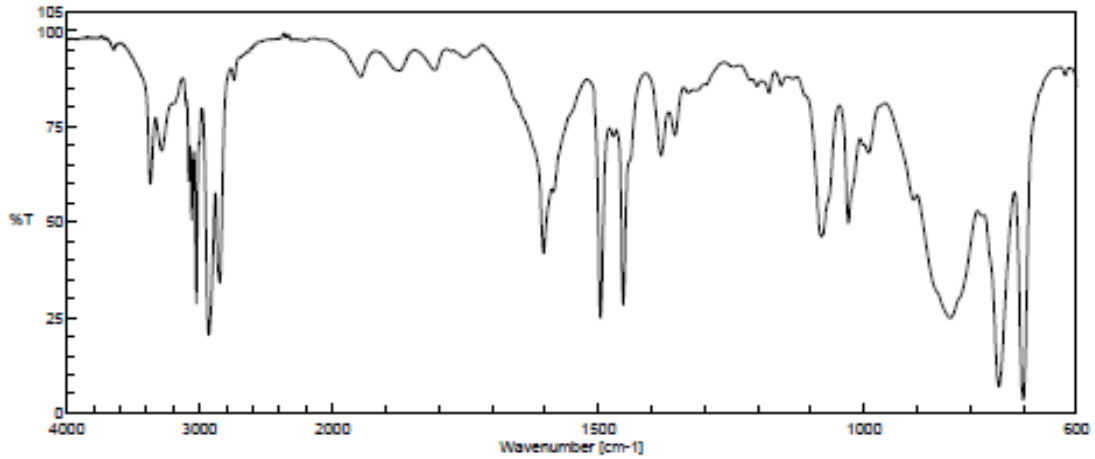
(1) Refractive index n_D^{25}: 1.526–1.532.

(2) Specific gravity 0.961–0.967.

Assay: Proceed as directed in the Peak Area Percentage Method in the Gas Chromatographic Assay under the Flavor Substance Tests. Use operating conditions (1).

Reference Spectrum

Phenethylamine



Attachment 2

Butylamine

Standard for use

It shall not be used for purposes other than flavoring.

Compositional specifications

Name of the substance: Butylamine

Structural formula:

Molecular formula: $C_4H_{11}N$

Mol. Weight: 73.14

Chemical name [CAS number]: Butylamine [109-73-9]

Content: Butylamine contains not less than 99.0% of butylamine ($C_4H_{11}N$).

Description: Butylamine occurs as a colorless to light yellow, transparent liquid having a characteristic odor.

Identification: Determine the infrared absorption spectrum of Butylamine, as directed in the Liquid Film Method under Infrared Spectrophotometry, and compare it with the Reference Spectrum. Both spectra exhibit absorptions having about the same intensity at the same wavenumbers.

Purity:

(1) Refractive index n_D^{25}: 1.398–1.404.

(2) Specific gravity d_{25}^{25}: 0.732–0.740.

Assay: Proceed as directed in the Peak Area Percentage Method in the Gas Chromatographic Assay under the Flavor Substance Tests, using operating conditions (2). Use a silicate glass capillary column (0.25–0.53 mm in internal diameter and 30–60 m in length), coated with a 0.25–1 μm thick layer of dimethyl polysiloxane.

Reference Spectrum

Butylamine