## Approval/authorization for use of 3-methyl-2-butanol and 5,6,7,8-tetrahydroquinoxaline

Purpose

This activity is to newly designate 3-methyl-2-butanol and 5,6,7,8-tetrahydroquinoxaline 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 under Article 11 of the Law, those additives may be 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 the designation of these substances as food additives. Conclusion of the subcommittee is outlined as below.

Conclusion from the subcommittee

The Minister should designate 3-methyl-2-butanol and 5,6,7,8-tetrahydroquinoxaline, based on Article 10 of the Food Sanitation Law, as food additives unlikely to harm human health, and establish compositional specifications for these substances, based on Article 11 of the law (see Attachments 1 and 2).

Attachment 1

# 3-Methyl-2-butanol

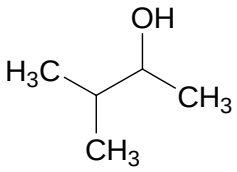
**Standard for use**

It shall not be used for purposes other than flavoring.

**Compositional specifications**

**Name of the substance:** 3-Methyl-2-butanol

**Structural formula:**




**Molecular formula:** $C_5H_{12}O$

**Mol. Weight:** 88.15

**Chemical name [CAS number]:** 3-Methylbutan-2-ol [598-75-4]

**Content:** 3-Methyl-2-butanol contains not less than 98.0% of 3-methyl-2-butanol ($C_5H_{12}O$).

**Description:** 3-Methyl-2-butanol occurs as a colorless, transparent liquid having a characteristic odor.

**Identification**: Determine the absorption spectrum of 3-Methyl-2-butanol, as directed in the Liquid Film Method under Infrared Spectrophotometry, and compare with the Reference Spectrum. Both spectra exhibit similar intensities of absorption at the same wavenumbers.

**Purity:**

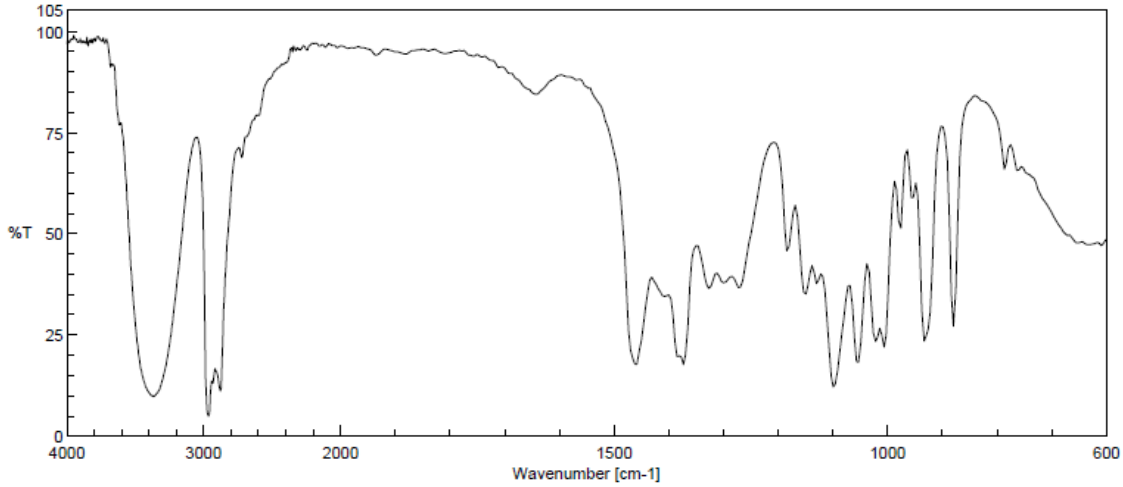
(1) Refractive index $n_D^{20}$: 1.406–1.412.

(2) Specific gravity $d_{25}^{25}$: 0.815–0.821.

**Assay:** Proceed as directed in the Peak Area Percentage Method in the Gas Chromatographic Assay under the Flavor Substance Tests. Use operating conditions (2).

Reference Spectrum

3-Methyl-2-butanol



Attachment 2

# 5,6,7,8-Tetrahydroquinoxaline

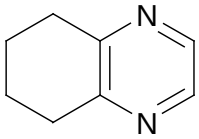
**Standard for use**

It shall not be used for purposes other than flavoring.

**Compositional specifications**

**Substance name:** 5,6,7,8-Tetrahydroquinoxaline

**Structural formula:**




**Molecular formula:** $C_8H_{10}N_2$

**Mol. Weight:** 134.18

**Chemical name [CAS number]:** 5,6,7,8-Tetrahydroquinoxaline [34413-35-9]

**Content:** 5,6,7,8-Tetrahydroquinoxaline contains not less than 98.0% of 5,6,7,8-tetrahydroquinoxaline ($C_8H_{10}N_2$).

**Description**: 5,6,7,8-Tetrahydroquinoxaline occurs as a colorless to light yellow liquid, having a characteristic odor.

**Identification**: Determine the absorption spectrum of 5,6,7,8-Tetrahydroquinoxaline, as directed in the Liquid Film Method under Infrared Spectrophotometry, and compare with the Reference Spectrum. Both spectra exhibit similar intensities of absorption at the same wavenumbers.

**Purity:**

(1) Refractive index $n_D^{20}$ : 1.540–1.550.

(2) Specific gravity 1.078–1.088.

**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

5,6,7,8-Tetrahydroquinoxaline