Status: Currently Official on 17-Feb-2025
Official Date: Official Prior to 2013
Document Type: USP Monographs
DocId: GUID-A848DD1B-4688-4289-945F-8E638354272B_2_en-US
DOI: https://doi.org/10.31003/USPNF_M4600_02_01
DOI Ref: ud5np

Amyl Nitrite Inhalant

» Amyl Nitrite Inhalant contains a mixture of the nitrite esters of 3-methyl-1-butanol and 2-methyl-1-butanol. It contains not less than 80.0 percent and not more than 105.0 percent of $C_5H_{11}NO_2$. It contains a suitable stabilizer.

[**Caution—**Amyl Nitrite Inhalant is very flammable. Do not use where it may be ignited.]

Packaging and storage—Preserve in tight, unit-dose glass containers, wrapped loosely in gauze or other suitable material, and store in a cool place, protected from light.

USP Reference standards ⟨11⟩—

USP Benzyl Benzoate RS

Specific gravity ⟨841⟩**:** between 0.870 and 0.880.

Content of total nitrites—Remove the gauze or other covering, place the glass container of Inhalant upright in a dry ice-acetone slurry, and cool for 10 minutes. Dry the container of Inhalant, place it in a pointed glass tube, and break the container with a glass rod. Proceed as directed for *Total nitrites* under *Amyl Nitrite*: not less than 95.0% is found.

Other requirements—It responds to the *Identification* tests and meets the requirements of the test for *Acidity* under *Amyl Nitrite*.

Assay—

Solvent: carbon tetrachloride.

Internal standard—USP Benzyl Benzoate RS.

Procedure—Remove the gauze or other covering from 1 or more Inhalant ampuls containing a total of 300 to 400 µL of amyl nitrite. Weigh accurately the clean and dry intact glass ampul(s), and place the weighed specimen in a freezer for not less than 15 minutes. Transfer the chilled specimen to a glass-stoppered, 25-mL conical flask containing a solution of 4 to 5 mEq of *Internal standard*, accurately weighed, in 1 to 2 mL of carbon tetrachloride. Break the ampul(s) with a glass rod, and rinse any sample or glass fragments adhering to the glass rod with 1 mL of carbon tetrachloride into the main assay solution. Insert the stopper in the flask immediately, mix, and proceed as directed for *Absolute Method of Quantitation* under *Nuclear Magnetic Resonance* ⟨761⟩, beginning with "When dissolution has been completed." With no spinning, or with the spinning adjusted so that the spinning side bands of neither the substance under assay nor the *Internal standard* interfere with the regions to be integrated, record as A_S the average area of the *Internal standard* singlet appearing at about 5.3 ppm, representing the methylene protons of benzyl benzoate, and record as A_U the average area of the multiplet with a band center at about 4.8 ppm, representing the alpha methylene protons of amyl nitrite, with reference to the tetramethylsilane singlet at 0 ppm. Calculate the quantity of $C_5H_{11}NO_2$ in the Inhalant taken, using 58.57 as the equivalent weight of amyl nitrite (EW_U) and 106.12 as that of benzyl benzoate (EW_S). Rinse the flask containing the assay preparation with three 5-mL portions of ether, decanting each rinsing carefully to avoid loss of glass fragments, and evaporate any remaining ether with the aid of a current of dry air. Transfer the dry glass fragments to a tared watch glass, weigh, and subtract the weight of the glass fragments from that of the intact ampul(s) to obtain the weight of the Inhalant taken.

Auxiliary Information - Please check for your question in the FAQs before contacting USP.

Topic/Question	Contact	Expert Committee
AMYL NITRITE INHALANT	Documentary Standards Support	SM22020 Small Molecules 2
REFERENCE STANDARD SUPPORT	RS Technical Services RSTECH@usp.org	SM22020 Small Molecules 2

Chromatographic Database Information: Chromatographic Database

Most Recently Appeared In:
Pharmacopeial Forum: Volume No. Information currently unavailable

Current DocID: GUID-A848DD1B-4688-4289-945F-8E638354272B_2_en-US
Previous DocID: GUID-A848DD1B-4688-4289-945F-8E638354272B_1_en-US
DOI: https://doi.org/10.31003/USPNF_M4600_02_01

DOI ref: ud5np