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Chromium Picolinate Tablets

DEFINITION

Chromium Picolinate Tablets contain NLT 95.0% and NMT 125.0% of the labeled amount of chromium (Cr).

IDENTIFICATION

• **A.** The *Sample solution* prepared as directed in the test for *Strength* gives a positive test for chromium, determined at 357.9 nm using the *Instrumental conditions* in the test for *Content of Chromium*.

STRENGTH

• CONTENT OF CHROMIUM

Standard stock solution A: 1000 µg/mL of chromium from potassium dichromate, previously dried at 120° for 4 h, in water. Store in a polyethylene bottle.

Standard stock solution B: Transfer 1.0 mL of *Standard stock solution A* to a 100-mL volumetric flask, add 5.0 mL of 6 N hydrochloric acid, and dilute with water to volume to obtain a solution having a concentration of 10 µg/mL of chromium.

Standard solutions: Dilute *Standard stock solution B* with 0.125 N hydrochloric acid to obtain concentrations of 1.0, 2.0, 3.0, and 4.0 µg/mL of chromium.

Sample solution: Weigh and finely powder NLT 20 Tablets. Transfer a portion of the powder, equivalent to 5 Tablets, to a porcelain crucible, heat the crucible in a muffle furnace maintained at about 550° for 6–12 h, and cool. Add 60 mL of hydrochloric acid, and boil gently on a hot plate or steam bath for 30 min, intermittently rinsing the inner surface of the crucible with 6 N hydrochloric acid. Cool, and transfer the contents of the crucible to a 100-mL volumetric flask. Rinse the crucible with small portions of 6 N hydrochloric acid, and add the rinsings to the flask. Dilute with water to volume, mix, and filter, discarding the first 5 mL of the filtrate. Dilute this solution with 0.125 N hydrochloric acid to obtain a solution having a concentration of 2.5 µg/mL of chromium.

Instrumental conditions

(See [Atomic Absorption Spectroscopy \(852\)](#).)

Mode: Atomic absorption spectrophotometry

Lamp: Chromium hollow-cathode

Flame: Air–acetylene

Analytical wavelength: 357.9 nm (chromium emission line)

Blank: 0.125 N hydrochloric acid

Analysis

Samples: *Standard solutions* and *Sample solution*

Determine the absorbances of the *Samples*, using the *Blank*. From a linear regression equation, calculated using the absorbances of the *Standard solutions* versus the concentration, in µg/mL, of chromium, determine the concentration, *C*, in µg/mL, of chromium in the *Sample solution*.

Calculate the percentage of the labeled amount of chromium (Cr) in the portion of Tablets taken:

$$\text{Result} = (C/C_U) \times 100$$

C = determined concentration of chromium in the *Sample solution* (µg/mL)

C_U = nominal concentration of chromium in the *Sample solution* (µg/mL)

Acceptance criteria: 95.0%–125.0%

PERFORMANCE TESTS

- [DISINTEGRATION AND DISSOLUTION OF DIETARY SUPPLEMENTS \(2040\)](#): Meet the requirements for *Disintegration*
- [WEIGHT VARIATION OF DIETARY SUPPLEMENTS \(2091\)](#): Meet the requirements

ADDITIONAL REQUIREMENTS

- **PACKAGING AND STORAGE:** Preserve in well-closed containers, and store at controlled room temperature.

Auxiliary Information - Please [check for your question in the FAQs](#) before contacting USP.

Topic/Question	Contact	Expert Committee
CHROMIUM PICOLINATE TABLETS	Natalia Davydova Scientific Liaison	NBDS2020 Non-botanical Dietary Supplements

Chromatographic Database Information: [Chromatographic Database](#)

Most Recently Appeared In:

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