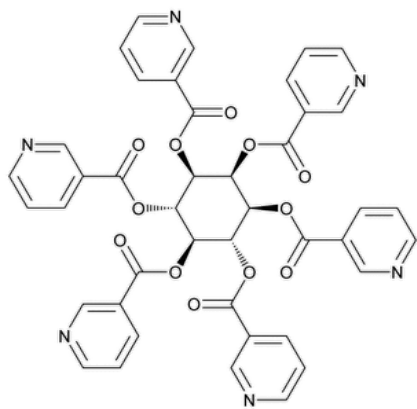


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Add the following:

Inositol Niacinate



$C_{42}H_{30}N_6O_{12}$ 810.73
myo-Inositol hexanicotinate;
myo-Inositol, hexa-3-pyridinecarboxylate;
(1*R*,2*r*,3*S*,4*R*,5*s*,6*S*)-Cyclohexane-1,2,3,4,5,6-hexayl hexanicotinate CAS RN[®]: 6556-11-2; UNII: A99MK953KZ.

DEFINITION
Inositol Niacinate, also known as Inositol Nicotinate or Inositol Hexanicotinate, contains NLT 98.0% and NMT 101.5% of inositol niacinate ($C_{42}H_{30}N_6O_{12}$), calculated on the as-is basis.

- IDENTIFICATION**
- A. [SPECTROSCOPIC IDENTIFICATION TESTS \(197\)](#), [Infrared Spectroscopy](#): 197K
 - B. The retention time of the major peak of the *Sample solution* corresponds to that of the *Standard solution*, as obtained in the Assay.

ASSAY

- PROCEDURE
- Solution A: [Water](#)
- Solution B: [Acetonitrile](#)
- Mobile phase: See [Table 1](#).

Table 1

Time (min)	Solution A (%)	Solution B (%)
0.00	68	32
10.00	68	32
14.00	25	75
19.00	25	75
23.00	68	32

Time (min)	Solution A (%)	Solution B (%)
25.00	68	32

Diluent: [Acetonitrile](#) and [water](#) (1:1)

Standard solution: 0.2 mg/mL of [USP Inositol Niacinate RS](#) in *Diluent*

Sample solution: 0.2 mg/mL of Inositol Niacinate in *Diluent*

Chromatographic system

(See [Chromatography \(621\), System Suitability.](#))

Mode: LC

Detector: UV 262 nm

Column: 4.6-mm × 25-cm; 5-μm packing [L1](#)

Column temperature: 35°

Flow rate: 1.0 mL/min

Injection volume: 20 μL

System suitability

Sample: *Standard solution*

Suitability requirements

Resolution: NLT 1.0 between each adjacent regioisomer of inositol pentaniacinate

Relative standard deviation: NMT 2.0%

Analysis

Samples: *Standard solution* and *Sample solution*

Calculate the percentage of inositol niacinate ($C_{42}H_{30}N_6O_{12}$) in the portion of Inositol Niacinate taken:

$$\text{Result} = (r_U/r_S) \times (C_S/C_U) \times 100$$

r_U = peak response of inositol niacinate from the *Sample solution*

r_S = peak response of inositol niacinate from the *Standard solution*

C_S = concentration of [USP Inositol Niacinate RS](#) in the *Standard solution* (mg/mL)

C_U = concentration of Inositol Niacinate in the *Sample solution* (mg/mL)

Acceptance criteria: 98.0%–101.5% on the as-is basis

IMPURITIES

• [CHLORIDE \(221\)](#)

Sample: Mix 1.0 g of inositol niacinate in 30 mL of [water](#), sonicate for 5 min, and filter. Add 1 mL of [nitric acid](#) to the filtrate.

Acceptance criteria: The filtrate shows no more chloride than corresponds to 0.2 mL of 0.02 N hydrochloric acid (NMT 146 ppm).

• [RESIDUE ON IGNITION \(281\)](#): NMT 0.1%

• RELATED COMPOUNDS

Solution A, Solution B, Mobile phase, Diluent, Sample solution, and Chromatographic system: Proceed as directed in the Assay.

Resolution solution: Prepare as directed for the *Standard solution* in the Assay.

Standard solution: 0.2 μg/mL of [USP Inositol Niacinate RS](#) in *Diluent*

System suitability

Sample: *Resolution solution* and *Standard solution*

[NOTE—The relative retention times in [Table 2](#) are provided as information that could aid in peak assignment.]

Table 2

Name	Relative Retention Time
Niacin	0.11
Inositol pentanicotinate, ^a regioisomer 1	

