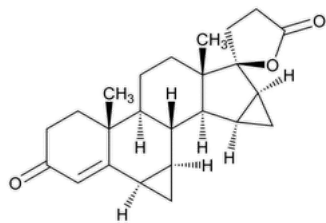


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Drospirenone



$C_{24}H_{30}O_3$ 366.49
(6*R*,7*R*,8*R*,9*S*,10*R*,13*S*,14*S*,15*S*,16*S*,17*S*)-1,3',4',6,6a,7,8,9,10, 11,12,13,14,15,15a,16-Hexadecahydro-10,13-dimethylspiro-[17*H*-dicyclopropa[6,7:15,16]cyclopenta[a]phenanthrene-17,2'(5'*H*)-furan]-3,5'(2*H*)-dione;
17-Hydroxy-6β,7β:15β,16β-dimethylene-3-oxo-17 α-pregn-4-ene-21-carboxylic acid, γ-lactone CAS RN®: 67392-87-4; UNII: N295J34A25.

DEFINITION
Drospirenone contains NLT 98.0% and NMT 102.0% of $C_{24}H_{30}O_3$, calculated on the anhydrous and solvent-free basis.

IDENTIFICATION

Change to read:

- **A.** [▲SPECTROSCOPIC IDENTIFICATION TESTS \(197\), Infrared Spectroscopy: 197M▲](#) (CN 1-MAY-2020)
- **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	63	37
2.0	63	37
16.0	52	48
23.0	52	48
31.0	20	80
39.0	20	80
39.1	63	37
49.0	63	37

Diluent: Acetonitrile and water (1:1)
System suitability solution: 60 µg/mL of [USP Drospirenone RS](#) and 60 µg/mL of [USP Drospirenone Related Compound A RS](#) in *Diluent*
Standard solution: 0.6 mg/mL of [USP Drospirenone RS](#) in *Diluent*
Sample solution: 0.6 mg/mL of Drospirenone in *Diluent*
Chromatographic system

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

Mode: LC
Detector: UV 245 nm
Column: 4.6-mm × 25-cm; 3-µm packing L1
Column temperature: 35°
Flow rate: 1 mL/min
Injection size: 10 µL

System suitability

Samples: *System suitability solution* and *Standard solution*
Suitability requirements
Resolution: NLT 5.0 between drospirenone and drospirenone related compound A, *System suitability solution*
Tailing factor: Between 0.8 and 1.5, *Standard solution*
Relative standard deviation: NMT 2.0%, *Standard solution*

Analysis

Samples: *Standard solution* and *Sample solution*
Calculate the percentage of drospirenone (C₂₄H₃₀O₃) in the portion of Drospirenone taken:

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

r_U = peak response from the *Sample solution*
 r_S = peak response from the *Standard solution*
 C_S = concentration of [USP Drospirenone RS](#) in the *Standard solution* (mg/mL)
 C_U = concentration of drospirenone in the *Sample solution* (mg/mL)

Acceptance criteria: 98.0%–102.0%

IMPURITIES

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

ORGANIC IMPURITIES
• **PROCEDURE 1: LIMIT OF 1,2-DIMETHOXYETHANE AND DIISOPROPYL ETHER** (if present)
Standard solution: 0.1 mg/mL of 1,2-dimethoxyethane and 0.05 mg/mL of diisopropyl ether in dimethylformamide
Sample solution: 50 mg/mL of Drospirenone in dimethylformamide
Chromatographic system

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

Mode: GC
Detector: Flame ionization
Column: 0.25-mm × 30-m; 1.4-µm coating of phase G43
Temperature
Injector: 160°
Detector: 250°
Column: See [Table 2](#).

Table 2

Initial Temperature (°)	Temperature Ramp (°/min)	Final Temperature (°)	Hold Time at Final Temperature (min)
40	0	40	10
40	5	70	0
70	30	220	0

Carrier gas: Helium
Flow rate: 32 ± 8 cm/s. [NOTE—For pressure- controlled systems, a column pressure of about 130 kPa is necessary.]
Injector type: Headspace
Sample volume: 2.0 mL/vial
Vial treatment: Maintain at 80° for 60 min before injection.