

## CERTIFICATE OF ANALYSIS

Date of Analysis: 03/08/2023

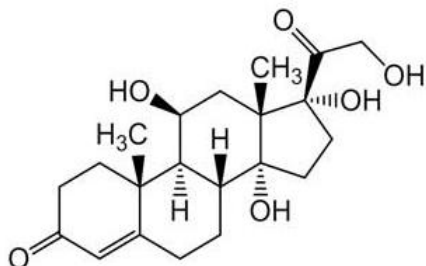
**Impurity Name:-** HYDROCORTISONE IMPURITY I

**CatLog no:** OM\_1721

**Batch no:** OM\_1721/2

**IUPAC Name:-** 11 $\beta$ ,14,17,21-Tetrahydroxypregn-4-ene-3,20-dione

**Cas No:-** 103795-84-2



**Molecular Weight:** 378.46g/mol

**Molecular Formula:** C<sub>21</sub>H<sub>30</sub>O<sub>6</sub>

**Solubility:** MeOH: ACN

Sr. No	TEST	STANDARD	RESULT
1	Appearance	White Solid to Off White Solid	Off White Solid
2	IR	Meets the requirements under the test	Complies
3	NMR	Meets the requirements under the test	Complies
4	MASS	Meets the requirements under the test	Complies
5	Chromatographic purity by HPLC	NLT: 90.0%	94.44 %
6	Weight Loss By TGA	NA	1.344 %
7	Residue Of Ignition	NA	0.861 %
8	Potency	NA	93.09 %

% Potency = [Chromatographic Purity % - TGA Value %] = [94.44 – 1.344] = 93.09 %

**Method of Analysis:** As per In-House Method

**Material shipping conditions:** At room temperature

**Long term storage:** Store at 2-8°C. Protect from moisture and direct sunlight.

**Date of manufacturing:** 03/08/2023

**Expiry date:** 3 years form the date of manufacturing,.

**Document data reference:** AMD/LNB/ OM\_1710/2

**Recommendation:** Released

**Re-test Date:** 03/08/2026

**It is a system-generated. It is for technical approval purposes only. A singed COA will be  
Provided before dispatch of the material**

**Prepared by**  
Analytical

**Reviewed by**  
QA

**Approved by**  
Analytical Director

*Certificate of analysis is valid for 3 years form the date of manufacturing,provided the substance is  
store under suitable conditions.*



Current Data Parameters  
 NAME QC11230627001  
 EXPNO 1  
 PROCNO 1

5.553  
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 5.361  
 5.347  
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 4.740  
 4.676  
 4.662  
 4.646  
 4.525  
 4.491  
 4.476  
 4.461  
 4.322  
 4.313  
 4.232  
 4.103  
 4.089  
 2.410  
 2.373  
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 1.472  
 1.370  
 1.359  
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 0.783

15 14 13 12 11 10 9 8 7 6 5 4 3 2 1 0 ppm

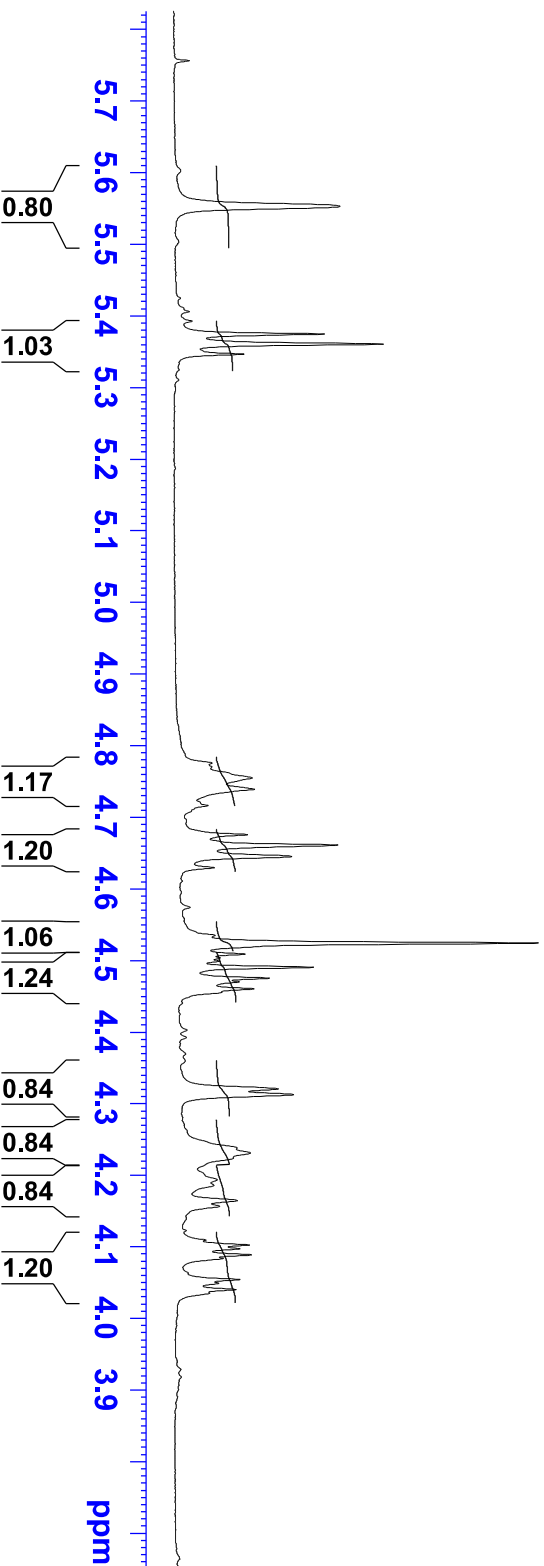
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 1.10  
 2.90  
 0.92

F2 - Acquisition Parameters  
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 FIDRES 0.244532 Hz  
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 DE 16.75 usec  
 TE 0 K  
 D1 1.00000000 sec  
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Current Data Parameters  
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 PLW1

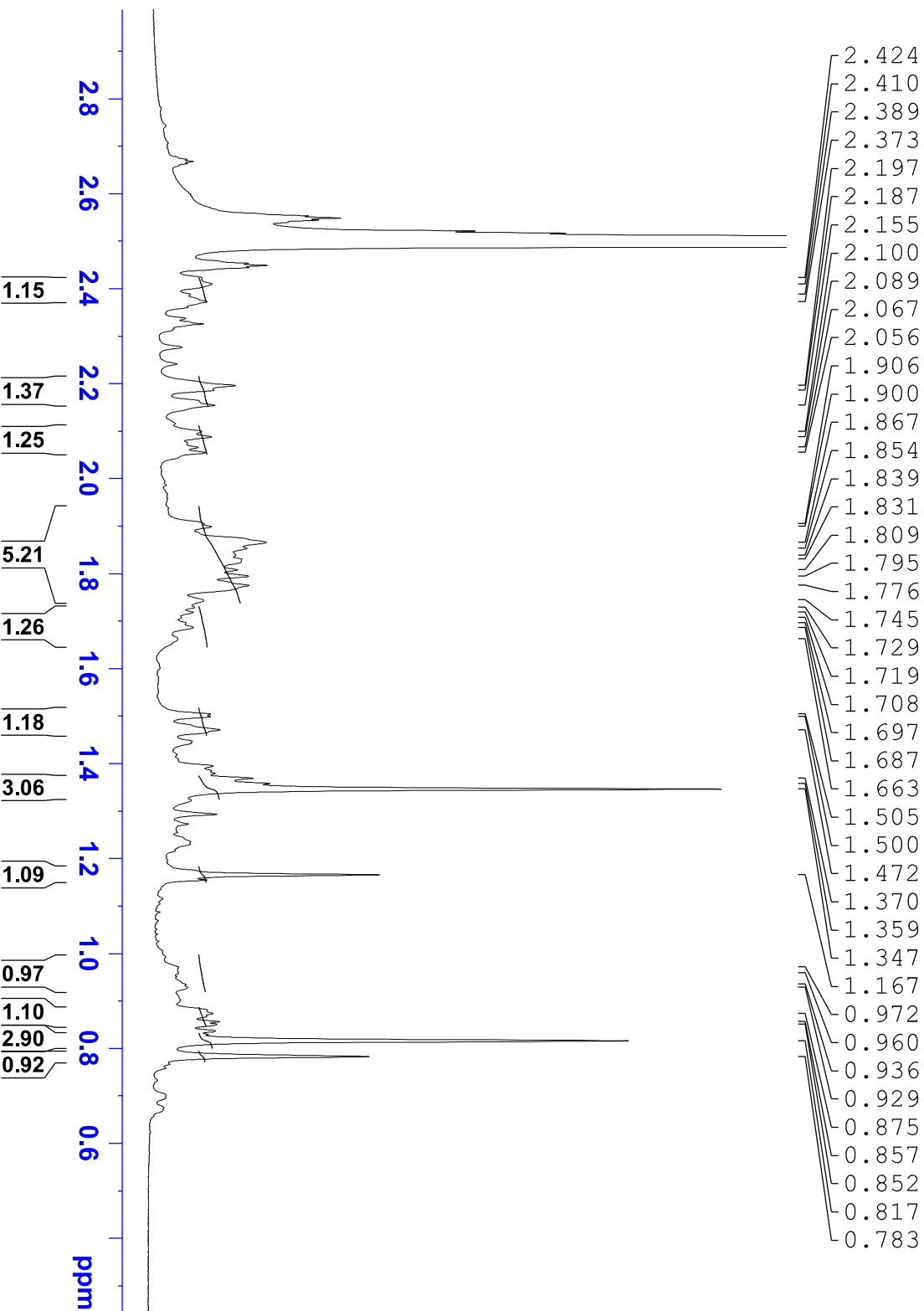
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Current Data Parameters  
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 EXPNO 1  
 PROCNO 1

F2 - Acquisition Parameters  
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 Time\_ 11.02 h  
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 SWH 0.244532 Hz  
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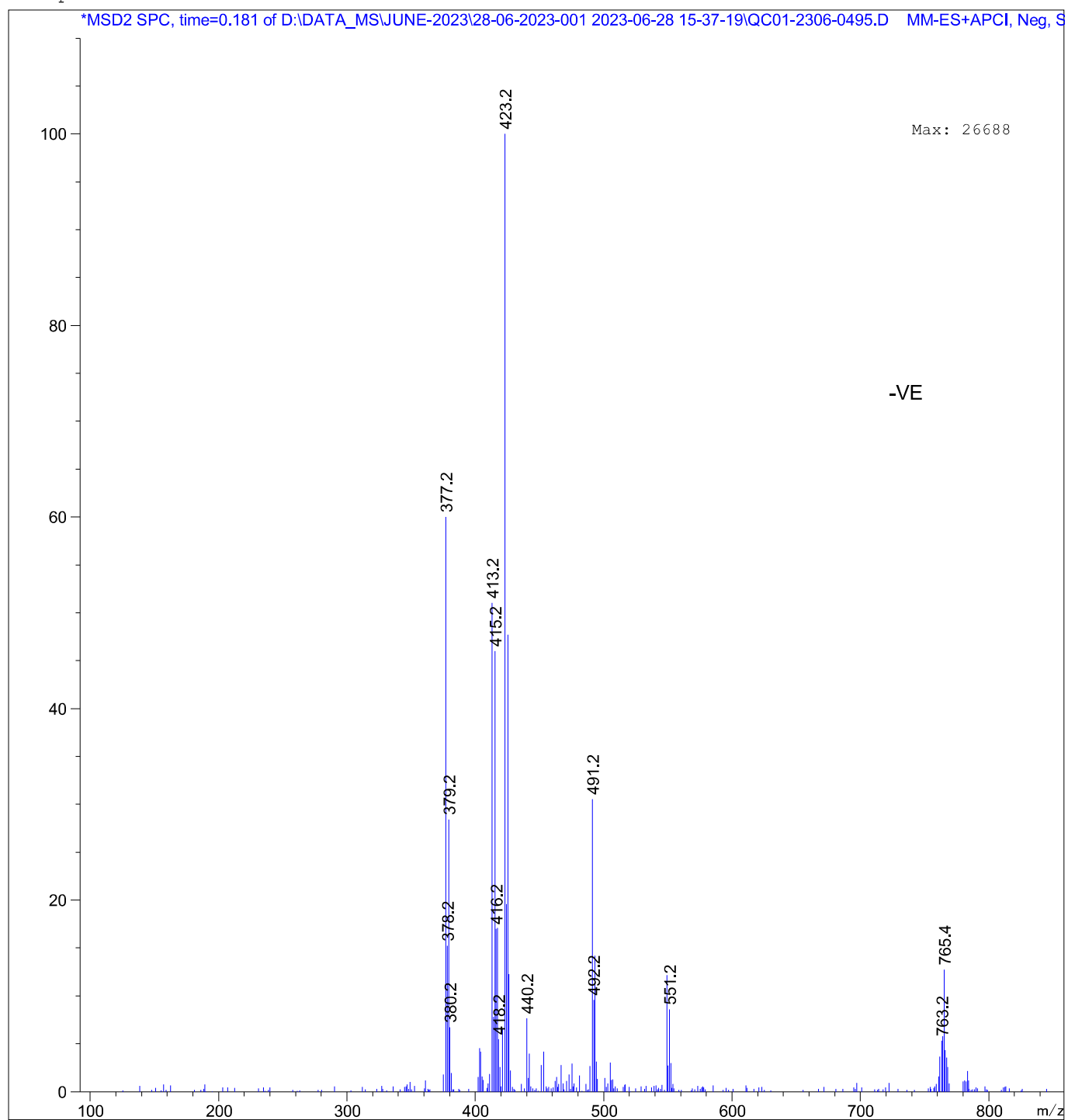
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Sample Name : OM\_1721/2

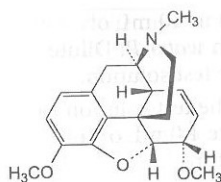
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Acq. Instrument : QC-LCMS Location : 59  
Injection Date : 6/28/2023 5:22:15 PM Inj : 1  
Inj Volume : 10.000 µl  
Acq. Method : D:\data\_ms\JUNE-2023\28-06-2023-001 2023-06-28 15-37-19\MASS AA METHOD\_new..M  
Last changed : 6/28/2023 3:37:19 PM by SYSTEM  
Analysis Method : C:\CHEM32\1\METHODS\MASS AA METHOD\_new..M  
Last changed : 6/28/2023 4:55:00 PM by SYSTEM  
(modified after loading)  
Method Info : Mobile phase: 5mM of Ammonium acetate in 1000 ml of Water:ACN(50:50)  
Flow 0.5ml Fragmentor110  
Sample Info : Diluent:Methanol Molecular weight:378.5

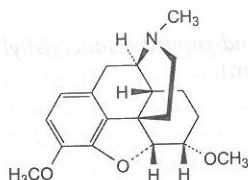
## MS Spectrum



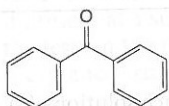
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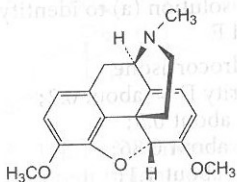
F. 7,8-didehydro-4,5α-epoxy-3,6α-dimethoxy-17-methylmorphinan (methylcodeine),



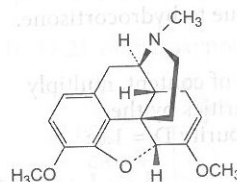
G. 4,5α-epoxy-3,6α-dimethoxy-17-methylmorphinan (tetrahydrothebaine),



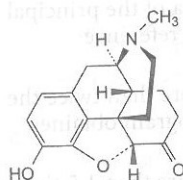
H. diphenylmethanone (benzophenone),



I. 6,7,8,14-tetradehydro-4,5α-epoxy-3,6-dimethoxy-17-methylmorphinan (thebaine),



J. 6,7-didehydro-4,5α-epoxy-3,6-dimethoxy-17-methylmorphinan,

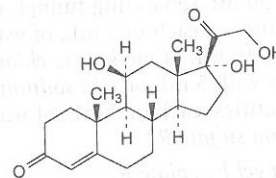


K. 4,5α-epoxy-3-hydroxy-17-methylmorphinan-6-one.



## HYDROCORTISONE

### Hydrocortisonum



$C_{21}H_{30}O_5$   
[50-23-7]

$M_r$  362.5

#### DEFINITION

11β,17,21-Trihydroxypregn-4-ene-3,20-dione.

Content: 97.0 per cent to 103.0 per cent (dried substance).

#### CHARACTERS

Appearance: white or almost white, crystalline powder.

Solubility: practically insoluble in water, sparingly soluble in acetone and in ethanol (96 per cent), slightly soluble in methylene chloride.

It shows polymorphism (5.9).

#### IDENTIFICATION

First identification: A, B.

Second identification: C, D.

A. Infrared absorption spectrophotometry (2.2.24).

Comparison: hydrocortisone CRS.

If the spectra obtained in the solid state show differences, dissolve the substance to be examined and the reference substance separately in the minimum volume of acetone R, evaporate to dryness on a water-bath and record new spectra using the residues.

B. Liquid chromatography (2.2.29) as described in the test for related substances with the following modification.

Injection: test solution and reference solution (c).

Results: the principal peak in the chromatogram obtained with the test solution is similar in retention time and size to the principal peak in the chromatogram obtained with reference solution (c).

C. Thin-layer chromatography (2.2.27).

Solution A. Dissolve 25 mg of the substance to be examined in methanol R and dilute to 5 mL with the same solvent.

Solution B. Dissolve 25 mg of hydrocortisone CRS in methanol R and dilute to 5 mL with the same solvent.

Test solution (a). Dilute 2 mL of solution A to 10 mL with methylene chloride R.

Test solution (b). Transfer 0.4 mL of solution A to a glass tube 100 mm long and 20 mm in diameter and fitted with a ground-glass stopper or a polytetrafluoroethylene cap. Evaporate the solvent with gentle heating under a stream of nitrogen R. Add 2 mL of a 15 per cent V/V solution of glacial acetic acid R and 50 mg of sodium bismuthate R. Stopper the tube and shake the suspension in a mechanical shaker, protected from light, for 1 h. Add 2 mL of a 15 per cent V/V solution of glacial acetic acid R and filter into a 50 mL separating funnel, washing the filter with 2 quantities, each of 5 mL, of water R. Shake the clear filtrate with 10 mL of methylene chloride R. Wash the organic layer with 5 mL of 1 M sodium hydroxide and then with 2 quantities, each of 5 mL, of water R. Dry over anhydrous sodium sulfate R.

Reference solution (a). Dilute 2 mL of solution B to 10 mL with methylene chloride R.



**Reference solution (b).** Transfer 0.4 mL of solution B to a glass tube 100 mm long and 20 mm in diameter and fitted with a ground-glass stopper or a polytetrafluoroethylene cap. Evaporate the solvent with gentle heating under a stream of nitrogen R. Add 2 mL of a 15 per cent V/V solution of glacial acetic acid R and 50 mg of sodium bismuthate R. Stopper the tube and shake the suspension in a mechanical shaker, protected from light, for 1 h. Add 2 mL of a 15 per cent V/V solution of glacial acetic acid R and filter into a 50 mL separating funnel, washing the filter with 2 quantities, each of 5 mL, of water R. Shake the clear filtrate with 10 mL of methylene chloride R. Wash the organic layer with 5 mL of 1 M sodium hydroxide and then with 2 quantities, each of 5 mL, of water R. Dry over anhydrous sodium sulfate R.

**Plate:** TLC silica gel  $F_{254}$  plate R.

**Mobile phase A:** add a mixture of 1.2 volumes of water R and 8 volumes of methanol R to a mixture of 15 volumes of ether R and 77 volumes of methylene chloride R.

**Mobile phase B:** butanol R saturated with water R, toluene R, ether R (5:15:80 V/V/V).

**Application:** 5  $\mu$ L of test solution (a) and reference solution (a), 25  $\mu$ L of test solution (b) and reference solution (b), applying the latter 2 in small quantities to obtain small spots.

**Development:** over a path of 15 cm with mobile phase A, and then over a path of 15 cm with mobile phase B.

**Drying:** in air.

**Detection A:** examine in ultraviolet light at 254 nm.

**Results A:** the principal spot in each of the chromatograms obtained with test solutions (a) and (b) is similar in position and size to the principal spot in the chromatogram obtained with the corresponding reference solution.

**Detection B:** spray with alcoholic solution of sulfuric acid R and heat at 120 °C for 10 min or until the spots appear; allow to cool, and examine in daylight and in ultraviolet light at 365 nm.

**Results B:** the principal spot in each of the chromatograms obtained with test solutions (a) and (b) is similar in position, colour in daylight, fluorescence in ultraviolet light at 365 nm and size to the principal spot in the chromatogram obtained with the corresponding reference solution; the principal spots in the chromatograms obtained with test solution (b) and reference solution (b) have an  $R_F$  value distinctly higher than that of the principal spots in the chromatograms obtained with test solution (a) and reference solution (a).

- D. Add about 2 mg to 2 mL of sulfuric acid R and shake to dissolve. Within 5 min, an intense brownish-red colour develops with a green fluorescence that is particularly intense when examined in ultraviolet light at 365 nm. Add the solution to 10 mL of water R and mix. The colour fades and a clear solution remains. The fluorescence in ultraviolet light does not disappear.

## TESTS

**Specific optical rotation (2.2.7):** + 162 to + 168 (dried substance).

Dissolve 0.200 g in methanol R, dilute to 25.0 mL with the same solvent and sonicate for 10 min.

**Related substances.** Liquid chromatography (2.2.29).

**Solvent mixture:** acetonitrile R, water R (40:60 V/V).

**Test solution.** Dissolve 20 mg of the substance to be examined in the solvent mixture, dilute to 10.0 mL with the solvent mixture and sonicate for 10 min.

**Reference solution (a).** Dissolve 4 mg of prednisolone CRS (impurity A), 2 mg of cortisone R (impurity B), 8 mg of hydrocortisone acetate CRS (impurity C) and 6 mg

of Reichstein's substance S R (impurity F) in 40 mL of acetonitrile R and dilute to 100.0 mL with water R. Dilute 0.5 mL of the solution to 5.0 mL with the test solution.

**Reference solution (b).** Dilute 1.0 mL of the test solution to 100.0 mL with the solvent mixture. Dilute 1.0 mL of this solution to 10.0 mL with the solvent mixture.

**Reference solution (c).** Dissolve 2 mg of hydrocortisone CRS in 1.0 mL of the solvent mixture and sonicate for 10 min.

**Reference solution (d).** Dissolve 2 mg of hydrocortisone for peak identification CRS (containing impurities D, E, G, H, I and N) in 1.0 mL of the solvent mixture and sonicate for 10 min.

**Column:**

- size:  $l = 0.25$  m,  $\varnothing = 4.6$  mm;
- stationary phase: base-deactivated end-capped octadecylsilyl silica gel for chromatography R (5  $\mu$ m).

**Mobile phase:**

- mobile phase A: water R;
- mobile phase B: acetonitrile R;

Time (min)	Mobile phase A (per cent V/V)	Mobile phase B (per cent V/V)
0 - 18	74	26
18 - 32	74 $\rightarrow$ 55	26 $\rightarrow$ 45
32 - 48	55 $\rightarrow$ 30	45 $\rightarrow$ 70

**Flow rate:** 0.8 mL/min.

**Detection:** spectrophotometer at 254 nm.

**Injection:** 10  $\mu$ L of the test solution and reference solutions (a), (b) and (d).

**Identification of impurities:** use the chromatogram supplied with hydrocortisone for peak identification CRS and the chromatogram obtained with reference solution (d) to identify the peaks due to impurities D, E, G, H, I and N; use the chromatogram obtained with reference solution (a) to identify the peaks due to impurities A, B, C and F.

**Relative retention** with reference to hydrocortisone (retention time = about 24 min): impurity D = about 0.2; impurity H = about 0.3; impurity I = about 0.5; impurity G = about 0.8; impurity E = about 0.86; impurity A = about 0.96; impurity B = about 1.1; impurity F = about 1.4; impurity C = about 1.5; impurity N = about 1.7.

**System suitability:** reference solution (a):

- peak-to-valley ratio: minimum 3.0, where  $H_p$  = height above the baseline of the peak due to impurity A and  $H_v$  = height above the baseline of the lowest point of the curve separating this peak from the peak due to hydrocortisone.

**Limits:**

- correction factors: for the calculation of content, multiply the peak areas of the following impurities by the corresponding correction factor: impurity D = 1.8; impurity E = 2.7;
- impurities C, D, E, I: for each impurity, not more than 5 times the area of the principal peak in the chromatogram obtained with reference solution (b) (0.5 per cent);
- impurity G: not more than 4 times the area of the principal peak in the chromatogram obtained with reference solution (b) (0.4 per cent);
- impurity F: not more than 3 times the area of the principal peak in the chromatogram obtained with reference solution (b) (0.3 per cent);
- impurities A, B: for each impurity, not more than twice the area of the principal peak in the chromatogram obtained with reference solution (b) (0.2 per cent);
- impurities H, N: for each impurity, not more than 1.5 times the area of the principal peak in the chromatogram obtained with reference solution (b) (0.15 per cent);



- *unspecified impurities*: for each impurity, not more than the area of the principal peak in the chromatogram obtained with reference solution (b) (0.10 per cent);
- *total*: not more than 20 times the area of the principal peak in the chromatogram obtained with reference solution (b) (2.0 per cent);
- *disregard limit*: 0.5 times the area of the principal peak in the chromatogram obtained with reference solution (b) (0.05 per cent).

**Loss on drying** (2.2.32): maximum 1.0 per cent, determined on 1.000 g by drying in an oven at 105 °C.

#### ASSAY

Dissolve 0.100 g in *ethanol* (96 per cent) *R* and dilute to 100.0 mL with the same solvent. Dilute 2.0 mL of the solution to 100.0 mL with *ethanol* (96 per cent) *R*. Measure the absorbance (2.2.25) at the absorption maximum at 241.5 nm. Calculate the content of  $C_{21}H_{30}O_5$  taking the specific absorbance to be 440.

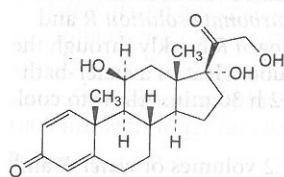
#### STORAGE

Protected from light.

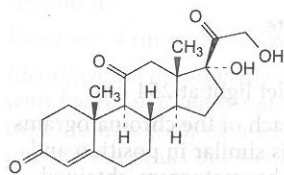
#### IMPURITIES

*Specified impurities*: A, B, C, D, E, F, G, H, I, N.

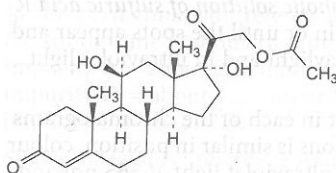
*Other detectable impurities* (the following substances would, if present at a sufficient level, be detected by one or other of the tests in the monograph. They are limited by the general acceptance criterion for other/unspecified impurities and/or by the general monograph *Substances for pharmaceutical use* (2034). It is therefore not necessary to identify these impurities for demonstration of compliance. See also 5.10. *Control of impurities in substances for pharmaceutical use*): J, K, L, M, O.



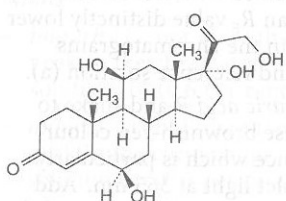
A. 11β,17,21-trihydroxypregna-1,4-diene-3,20-dione (prednisolone),



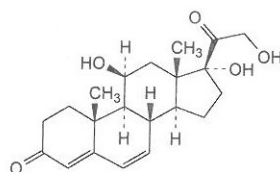
B. 17,21-dihydroxypregn-4-ene-3,11,20-trione (cortisone),



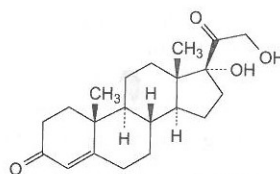
C. 11β,17-dihydroxy-3,20-dioxopregn-4-en-21-yl acetate (hydrocortisone acetate),



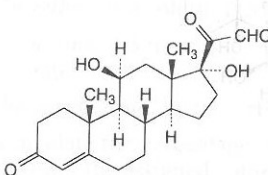
D. 6β,11β,17,21-tetrahydroxypregn-4-ene-3,20-dione (6β-hydroxyhydrocortisone),



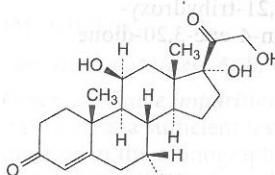
E. 11β,17,21-trihydroxypregna-4,6-diene-3,20-dione (Δ6-hydrocortisone),



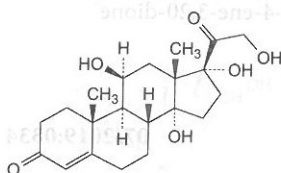
F. 17,21-dihydroxypregn-4-ene-3,20-dione (Reichstein's substance S),



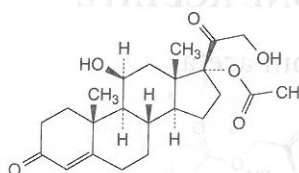
G. 11β,17-dihydroxy-3,20-dioxopregn-4-en-21-al (hydrocortisone-21-aldehyde),



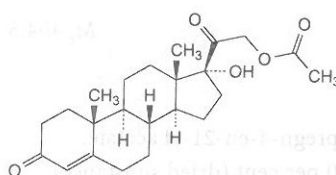
H. 7α,11β,17,21-tetrahydroxypregn-4-ene-3,20-dione (7α-hydroxyhydrocortisone),



I. 11β,14,17,21-tetrahydroxypregn-4-ene-3,20-dione (14α-hydroxyhydrocortisone),

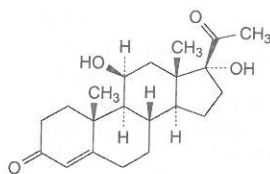


J. 11β,21-dihydroxy-3,20-dioxopregn-4-en-17-yl acetate (hydrocortisone-17-acetate),

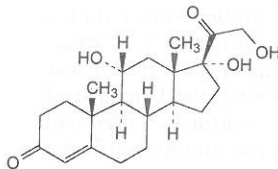
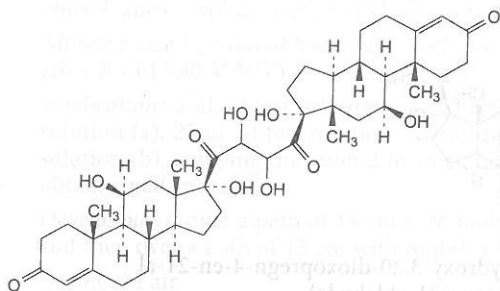
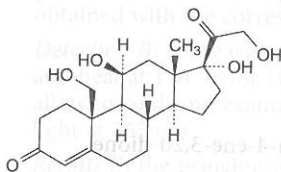


K. 17-hydroxy-3,20-dioxopregn-4-en-21-yl acetate (Reichstein's substance S-21-acetate),





L. 11β,17-dihydroxypregn-4-ene-3,20-dione (oxenol),

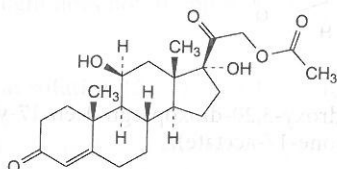
M. 11α,17,21-trihydroxypregn-4-ene-3,20-dione  
(*epi*-hydrocortisone),N. 11β,17,21-trihydroxy-21-(11β,17,21-trihydroxy-3,20-dioxopregn-4-en-21-yl)pregn-4-ene-3,20-dione  
(hydrocortisone dimer),O. 11β,17,19,21-tetrahydroxypregn-4-ene-3,20-dione  
(19-hydroxyhydrocortisone).

07/2019:0334



## HYDROCORTISONE ACETATE

## Hydrocortisoni acetat

C<sub>23</sub>H<sub>32</sub>O<sub>6</sub>  
[50-03-3]M<sub>r</sub> 404.5

## DEFINITION

11β,17-Dihydroxy-3,20-dioxopregn-4-en-21-yl acetate.

Content: 97.0 per cent to 102.0 per cent (dried substance).

## CHARACTERS

Appearance: white or almost white, crystalline powder.

Solubility: practically insoluble in water, slightly soluble in anhydrous ethanol and in methylene chloride.

## IDENTIFICATION

First identification: A, B.

Second identification: C, D, E.

A. Infrared absorption spectrophotometry (2.2.24).

Comparison: hydrocortisone acetate CRS.

B. Examine the chromatograms obtained in the assay.

Results: the principal peak in the chromatogram obtained with test solution (b) is similar in retention time and size to the principal peak in the chromatogram obtained with reference solution (d).

C. Thin-layer chromatography (2.2.27).

Test solution (a). Dissolve 25 mg of the substance to be examined in methanol R and dilute to 5 mL with the same solvent (solution A). Dilute 2 mL of the solution to 10 mL with methylene chloride R.

Test solution (b). Transfer 2 mL of solution A to a 15 mL glass tube with a ground-glass stopper or a polytetrafluoroethylene cap. Add 10 mL of saturated methanolic potassium hydrogen carbonate solution R and immediately pass a stream of nitrogen R briskly through the solution for 5 min. Stopper the tube. Heat in a water-bath at 45 °C protected from light for 2 h 30 min. Allow to cool.

Reference solution (a). Dissolve 25 mg of hydrocortisone acetate CRS in methanol R and dilute to 5 mL with the same solvent (solution B). Dilute 2 mL of the solution to 10 mL with methylene chloride R.

Reference solution (b). Transfer 2 mL of solution B to a 15 mL glass tube with a ground-glass stopper or a polytetrafluoroethylene cap. Add 10 mL of saturated methanolic potassium hydrogen carbonate solution R and immediately pass a stream of nitrogen R briskly through the solution for 5 min. Stopper the tube. Heat in a water-bath at 45 °C protected from light for 2 h 30 min. Allow to cool.

Plate: TLC silica gel F<sub>254</sub> plate R.

Mobile phase: add a mixture of 1.2 volumes of water R and 8 volumes of methanol R to a mixture of 15 volumes of ether R and 77 volumes of methylene chloride R.

Application: 5 µL.

Development: over 3/4 of the plate.

Drying: in air.

Detection A: examine in ultraviolet light at 254 nm.

Results A: the principal spot in each of the chromatograms obtained with the test solutions is similar in position and size to the principal spot in the chromatogram obtained with the corresponding reference solution.

Detection B: spray with alcoholic solution of sulfuric acid R and heat at 120 °C for 10 min or until the spots appear and allow to cool; examine in daylight and in ultraviolet light at 365 nm.

Results B: the principal spot in each of the chromatograms obtained with the test solutions is similar in position, colour in daylight, fluorescence in ultraviolet light at 365 nm and size to the principal spot in the chromatogram obtained with the corresponding reference solution. The principal spots in the chromatograms obtained with test solution (b) and reference solution (b) have an R<sub>F</sub> value distinctly lower than that of the principal spots in the chromatograms obtained with test solution (a) and reference solution (a).

D. Add about 2 mg to 2 mL of sulfuric acid R and shake to dissolve. Within 5 min an intense brownish-red colour develops with a green fluorescence which is particularly intense when viewed in ultraviolet light at 365 nm. Add this solution to 10 mL of water R and mix. The colour fades and the fluorescence in ultraviolet light does not disappear.

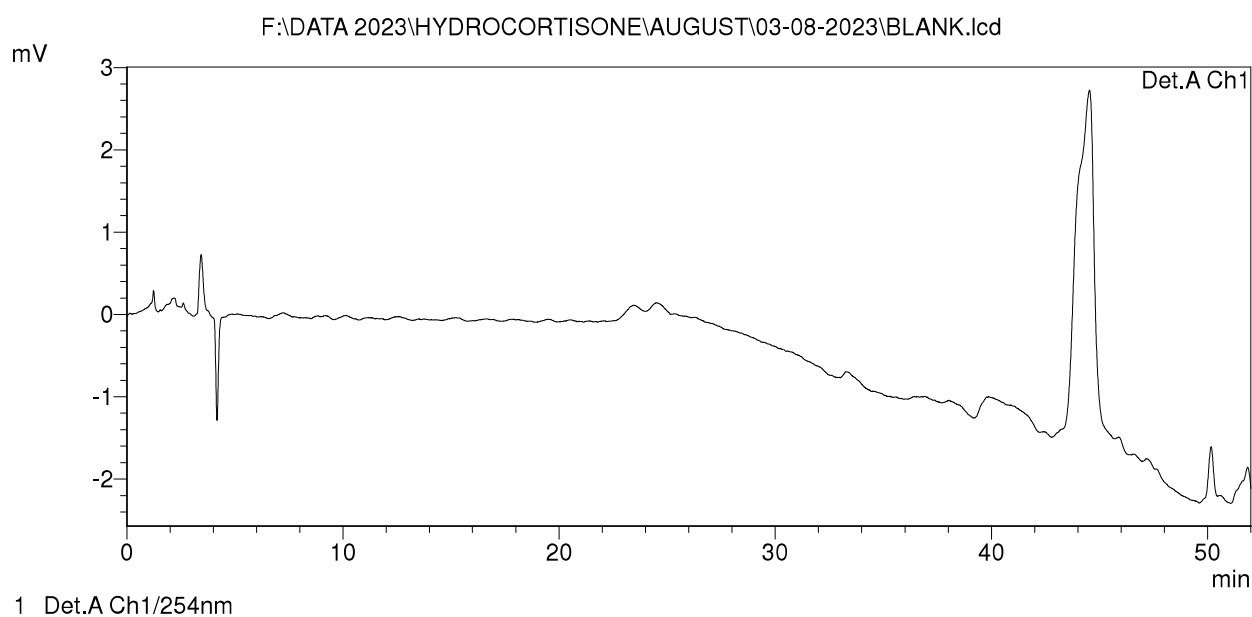
E. About 10 mg gives the reaction of acetyl (2.3.1).

# ==== Shimadzu LCsolution Analysis Report ====

Acquired by : Admin  
Sample Name : BLANK  
Sample ID : BLANK  
Tray# : 1  
Vial # : 51  
Injection Volume : 10 uL  
Data File Name : BLANK.lcd  
Method File Name : HYDROCORTISONE.lcm  
Batch File Name : SEQUENCE.lcb  
Report File Name : Default.lcr  
Data Acquired : 8/3/2023 7:23:37 PM  
Data Processed : 8/3/2023 8:15:38 PM

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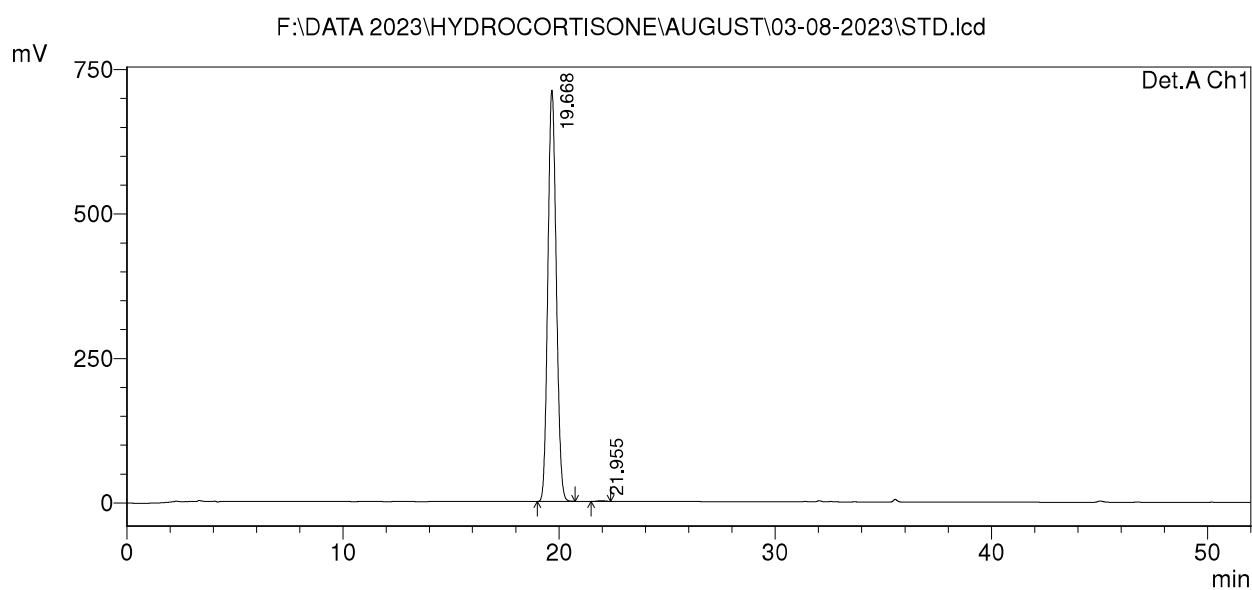
## <Chromatogram>



# ==== Shimadzu LCsolution Analysis Report =====

Acquired by : Admin  
Sample Name : STD  
Sample ID : STD  
Tray# : 1  
Vial # : 52  
Injection Volume : 10 uL  
Data File Name : STD.lcd  
Method File Name : HYDROCORTISONE.lcm  
Batch File Name : SEQUENCE.lcb  
Report File Name : Default.lcr  
Data Acquired : 8/3/2023 8:16:07 PM  
Data Processed : 8/3/2023 9:08:09 PM

## <Chromatogram>



PeakTable

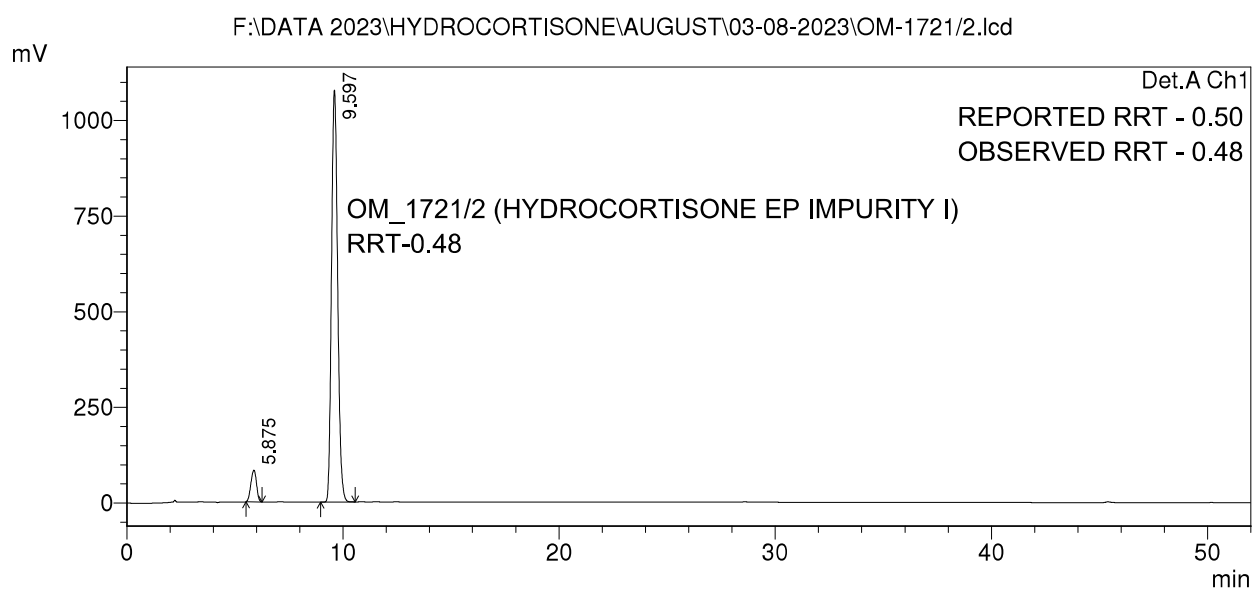
Detector A Ch1 254nm

Peak#	Ret. Time	Area	Height	Area %	Height %
1	19.668	19274527	711874	99.827	99.822
2	21.955	33354	1268	0.173	0.178
Total		19307881	713142	100.000	100.000

# ==== Shimadzu LCsolution Analysis Report ====

Acquired by : Admin  
Sample Name : OM-1721/2  
Sample ID : OM-1721/2  
Tray# : 1  
Vial # : 53  
Injection Volume : 10 uL  
Data File Name : OM-1721.lcd/2  
Method File Name : HYDROCORTISONE.lcm  
Batch File Name : SEQUENCE.lcb  
Report File Name : Default.lcr  
Data Acquired : 8/3/2023 9:08:37 PM  
Data Processed : 8/3/2023 10:00:38 PM

## <Chromatogram>



1 Det.A Ch1/254nm

PeakTable

Detector A Ch1 254nm

Peak#	Ret. Time	Area	Height	Area %	Height %
1	5.875	1494534	82568	5.557	7.124
2	9.597	21297552	1076474	94.443	92.876
Total		22792086	1159042	100.000	100.000



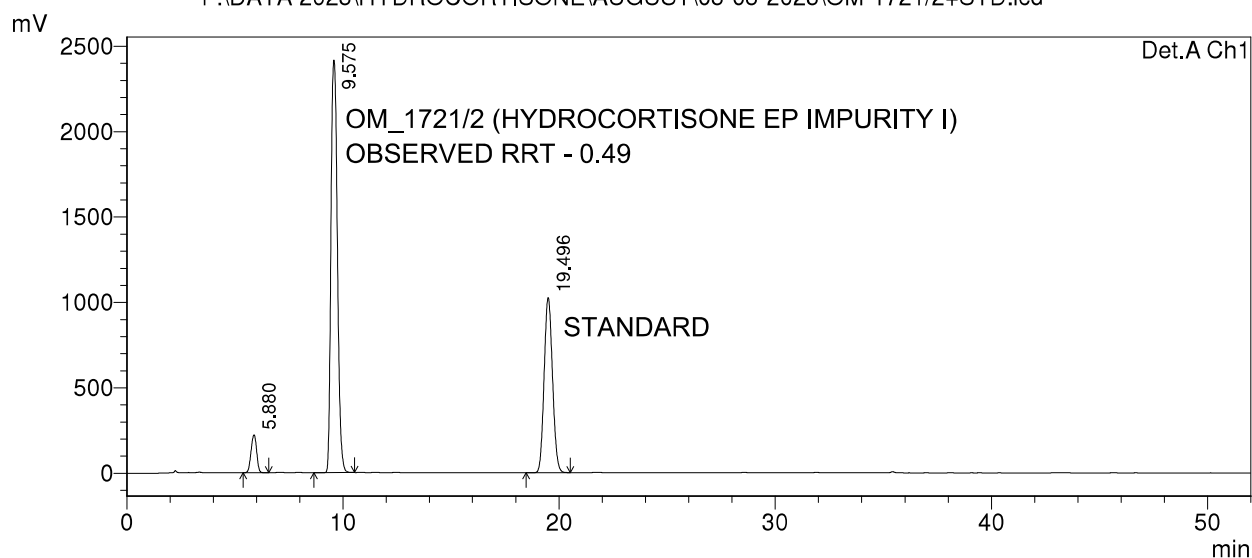
# ==== Shimadzu LCsolution Analysis Report ====

F:\DATA 2023\HYDROCORTISONE\AUGUST\03-08-2023\OM-1721/2+STD.lcd

Acquired by : Admin  
Sample Name : OM-1721+STD/2  
Sample ID : OM-1721+STD/2  
Tray# : 1  
Vial # : 54  
Injection Volume : 10 uL  
Data File Name : OM-1721/2+STD.lcd  
Method File Name : HYDROCORTISONE.lcm  
Batch File Name : SEQUENCE.lcb  
Report File Name : Default.lcr  
Data Acquired : 8/3/2023 10:01:05 PM  
Data Processed : 8/3/2023 10:53:07 PM

## <Chromatogram>

F:\DATA 2023\HYDROCORTISONE\AUGUST\03-08-2023\OM-1721/2+STD.lcd

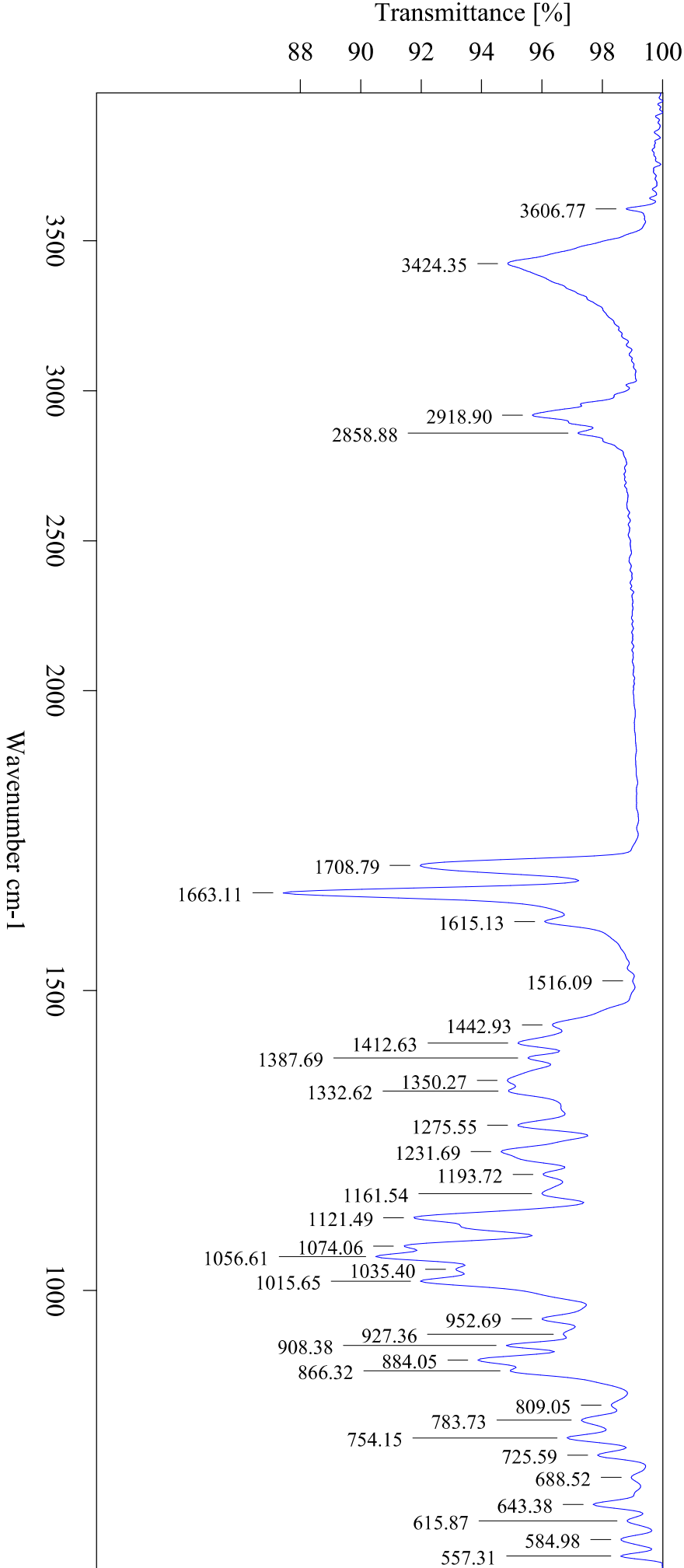


1 Det.A Ch1/254nm

PeakTable

Detector A Ch1 254nm

Peak#	Ret. Time	Area	Height	Area %	Height %
1	5.880	3981533	221895	4.898	6.057
2	9.575	49761246	2415779	61.220	65.939
3	19.496	27539985	1025976	33.882	28.004
Total		81282765	3663650	100.000	100.000



Sample Name: Om-1721/2

Experiment: ACCU ANALYTICAL-183.xpm

Lot No./Batch No:

Resolution: 4

Date & Time: 27-06-2023, 11:53:33

Sample Scans: 16

Operator Name: Accu Chemist

Frequency Range: 4000 to 500

Analysed by:  
Date:

Checked by:  
Date:

C:\Users\Public\Documents\Bruker\OPUS

Peak Table TR

Peak Picking

Peak Picking	Values
Method:	Standard
Searched for minima:	Yes
Number of peaks:	36
Sensitivity > [%]:	1.000000
From:	4000.000000
to:	400.000000
Absolute peak height >	0.000000
Relative peak height < [%]	0.000000
Absolute peak height <	0.000000

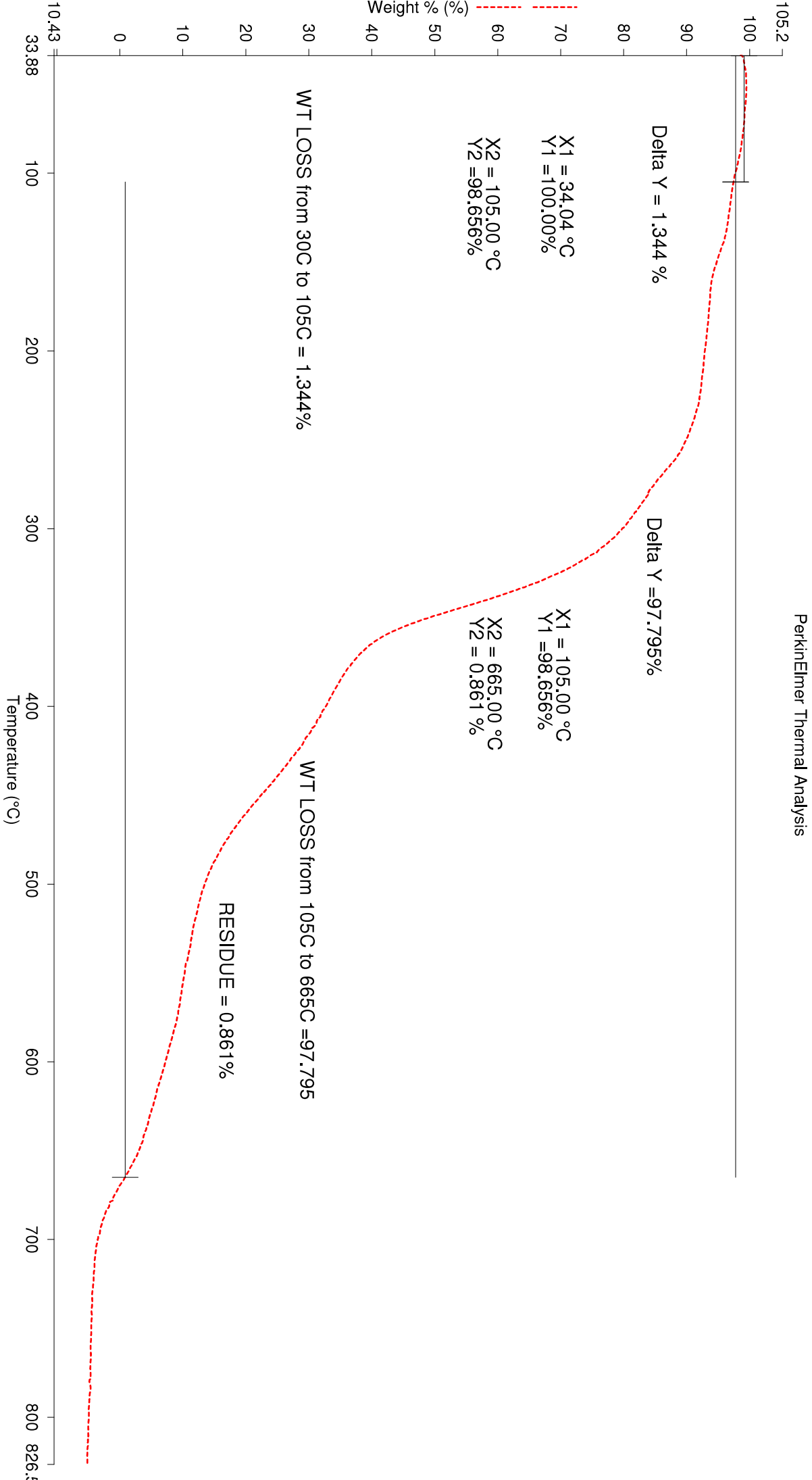
Wavenumber	Abs. intensity	Rel. intensity	Width	Found if threshold <	Shoulder
3606.7664	0.988	0.007	15.2214	5.120996	0
3424.3466	0.949	0.049	164.6314	34.464230	0
2918.8974	0.957	0.034	76.1962	27.346600	0
2858.8841	0.972	0.005	15.0003	3.963027	0
1708.7942	0.920	0.053	22.6550	41.794682	0
1663.1108	0.874	0.126	23.5003	100.042244	0
1615.1270	0.961	0.009	118.6945	5.203866	0
1442.9341	0.963	0.007	47.4445	2.572516	0
1412.6321	0.952	0.017	17.5161	11.077766	0
1387.6930	0.955	0.009	11.8589	6.032294	0
1350.2745	0.949	0.032	130.6280	21.238924	0
1332.6213	0.949	0.005	136.9139	1.948943	0
1275.5546	0.952	0.020	18.8129	12.508622	0
1231.6877	0.946	0.031	32.8399	21.798733	0
1193.7180	0.960	0.007	11.9798	5.184524	0
1161.5422	0.960	0.012	233.8789	6.136879	0
1121.4949	0.917	0.042	29.4347	31.244059	0
1074.0616	0.914	0.006	7.9170	3.535586	0
1056.6129	0.905	0.090	85.1047	68.294746	0
1035.4041	0.931	0.003	7.6522	2.302853	0
1015.6465	0.920	0.018	12.9730	11.738650	0

Peak Picking Values

Wavenumber	Abs. intensity	Rel. intensity	Width	Found if threshold < Shoulder
952.6943	0.960	0.012	13.4830 8.789943	0
908.3803	0.948	0.017	10.6180 12.718645	0
884.0496	0.939	0.041	35.1872 28.568428	0
866.3227	0.949	0.003	28.6341 1.637133	0
809.0525	0.983	0.003	98.3270 1.474188	0
783.7253	0.973	0.010	16.6985 6.532319	0
754.1534	0.968	0.023	19.2823 15.910135	0
725.5870	0.978	0.012	14.7532 7.493018	0
688.5232	0.990	0.004	15.9835 2.482344	0
643.3805	0.977	0.020	16.7725 13.810336	0
615.8721	0.988	0.007	14.1115 4.205430	0
584.9800	0.986	0.011	16.4453 8.200932	0
557.3138	0.986	0.012	11.3539 8.167745	0
1516.0853	0.990	0.001	9.6880 1.871271	0
927.3565	0.967	0.002	87.4494 2.785464	0



Filename: D:\TGA Data\OM-1721\2.t6d/  
Operator ID: BHARAT  
Sample ID: OM-1721/2  
Sample Weight: 1.092 mg  
Comment:



1) Heat from 35.00°C to 850.00°C at 20.00°C/min