



Ardex Analytical Laboratories

Plot 44, Pharma City, Genome Valley, Hyderabad 500078, India
NABL accredited testing laboratory · Certificate TC-91142 · Scope: chemical & microbiological

CERTIFICATE OF ANALYSIS

COA/2026/AX-11482

Issued 03 August 2026 · Revision 00

PRODUCT	Ascorbic Acid IP / BP, fine crystalline powder	BATCH / LOT NO.	AX-2606-0184
GRADE / SPEC	Pharmacopoeial grade (IP 2022 / BP 2024)	SPECIFICATION REF.	SPEC-ASC-014 Rev 6
BATCH SIZE	1 250 kg (25 drums)	MANUFACTURED	18 June 2026
SAMPLE RECEIVED	24 July 2026	RETEST / EXPIRY	17 June 2029
ANALYSIS PERIOD	24 – 31 July 2026	CUSTOMER	Vireo Pharmaceuticals Ltd, Vadodara

TEST RESULTS

#	TEST PARAMETER	METHOD	SPECIFICATION	RESULT	VERDICT
1	Description	Visual	White to very pale yellow crystalline powder	Complies	PASS
2	Identification (IR absorption)	IP 2.4.6	Conforms to reference spectrum	Conforms	PASS
3	Assay (on dried basis)	Titrimetry	99.0 % – 100.5 %	99.74 %	PASS
4	Specific optical rotation	IP 2.4.22	+20.5° to +21.5°	+21.02°	PASS
5	Loss on drying	IP 2.4.19	Not more than 0.40 % w/w	0.11 % w/w	PASS
6	Sulphated ash	IP 2.3.18	Not more than 0.10 % w/w	0.03 % w/w	PASS
7	Heavy metals (as Pb)	ICP-MS	Not more than 10 ppm	< 2 ppm	PASS
8	Residual solvents — methanol	GC headspace	Not more than 3 000 ppm	410 ppm	PASS
9	Bulk density	USP <616>	0.70 – 0.95 g/mL	0.68 g/mL	FAIL
10	Total aerobic microbial count	IP 2.2.9	Not more than 1 000 cfu/g	40 cfu/g	PASS

RELEASED WITH CONCESSION

The batch meets every pharmacopoeial requirement of SPEC-ASC-014 Rev 6. Bulk density falls marginally below the internal handling range and is released under approved concession CN-2026-071, which restricts the batch to direct-compression lines only.

REMARKS

- Sample drawn from 5 drums per the $\sqrt{n}+1$ sampling plan and composited before testing.
- Analysis performed on qualified instruments within their calibration validity.
- Concession CN-2026-071 authorised by Quality Assurance on 01 August 2026.

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Sneha Pillai
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31 July 2026

R. Bhatt

Rahul Bhatt
Section Head, Quality Control
01 August 2026

M. Varghese

Dr. Mary Varghese
Head of Quality Assurance
03 August 2026