ASES CHEMICAL WORKS

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CERTIFICATE OF ANALYSIS

Product Name	Vitamin E Acetate (DL-α-Tocopheryl Acetate) – Pharma Grade	**Batch No.**	1026
INCI / Chemical Name	Tocopheryl Acetate / all-rac-α-Tocopheryl Acetate	**Mfg. Date**	Feb-2026
CAS No. / Formula	7695-91-2 / C31H52O3 (MW 472.7)	**Release Date**	Feb-2026
Manufacturer	BASF SE, Ludwigshafen, Germany	**Retest Date**	Feb-2029
Packager	ASES Chemical Works, Jodhpur	**Date of Issue**	31-Oct-2026

S.No.	Test Parameter	Specification	Result
Assay & Activity			
1	Assay, all-rac-α-tocopheryl acetate (GC) – Ph.Eur.	98.0 – 102.0 g/100g	99.5
2	Assay, all-rac-α-tocopheryl acetate (GC) – USP	98.0 – 102.0 g/100g	99.6
3	Assay, DL-α-tocopherol acetate (LC) – JP	96.0 – 102.0 g/100g	98.5
4	Assay, Vitamin E (GC) – ChP	96.0 – 102.0 g/100g	99.4
5	Vitamin E activity (calc.) – USP **	980 – 1020 I.U./g	996
6	Vitamin E activity, as RRR-α-tocopherol **	Report (mg/g)	453
Description & Identification			
7	Appearance	Viscous, light yellow oil	Conforms
8	Identification – optical rotation (Ph.Eur. / USP)	-0.01° to +0.01°	Conforms
9	Identification – IR (JP / JSSFA / ChP)	Must conform	Conforms
10	Identification – HNO3 colour	Red to orange	Conforms
11	Identification – GC	Must conform	Conforms
Related Substances & Purity			
12	Impurity A	≤ 0.5 area-%	< 0.1
13	Impurity B	≤ 1.5 area-%	< 0.1
14	Impurity C	≤ 0.5 area-%	< 0.1
15	Sum of impurities D and E	≤ 1.0 area-%	0.2
16	Any other impurity	≤ 0.25 area-% each	Conforms
17	Total impurities	≤ 2.5 area-%	0.2
18	α-Tocopherol (free)	≤ 1.0 area-%	< 0.1
19	Other single impurities	≤ 1.5 area-% each	Conforms
20	Sum of all peaks (excl. principal peak)	≤ 2.5 area-%	0.2
21	Purity: α-tocopherol (TLC)	Must conform	Conforms
22	Clarity and colour of solution	Clear, not more coloured than control	Conforms
Physical & Chemical Properties			
23	Absorbance E(1%, 1 cm) at 284 nm in ethanol	41.0 – 45.0	43.3
24	Refractive index n(20/D)	1.494 – 1.498	1.497
25	Relative density d(20/20)	0.952 – 0.966	0.959
26	Acidity	≤ 0.5 ml of 0.10 N NaOH	Conforms
27	Acid value	≤ 2.0 mg KOH/g	0.2
28	Sulfated ash *	≤ 0.1 g/100g	Conforms
Heavy Metals & Residual Solvents			
29	Heavy metals *	≤ 20 mg/kg	Conforms
30	Zinc *	≤ 10 mg/kg	Conforms
31	Lead (Pb) *	≤ 0.5 mg/kg	Conforms
32	Cadmium (Cd) *	≤ 0.5 mg/kg	Conforms
33	Mercury (Hg) *	≤ 0.1 mg/kg	Conforms
34	Arsenic (As) *	≤ 1 mg/kg	Conforms
35	Residual solvent – Methanol *	≤ 3000 mg/kg	Conforms
36	Residual solvent – Heptane *	≤ 0.5 g/100g	Conforms

* Test verified on random samples.
** 1 mg all-rac-α-tocopheryl acetate = 0.455 mg RRR-α-tocopherol = 1 IU Vitamin E. DL-α-tocopheryl acetate = all-rac-α-tocopheryl acetate; D-α-tocopherol = RRR-α-tocopherol.

Pharmacopoeial compliance: Ph.Eur. (current), USP (current), IP 2022, JP (current), ChP 2025, JSSFA 9th ed.
Storage: Store in tightly closed original container in a cool, dry place, protected from light and air. Once opened, use contents promptly.

Conclusion: The above batch complies with the specification for Vitamin E Acetate (Pharma Grade).

Rohan Singhvi
Authorized Signatory
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