# CERTIFICATE OF ANALYSIS

## KINETIN-3-α-D-GLUCOSIDE (K3G)

[6-furfurylamino-3-α-D-glucopyranosylpurine]

**FW = 377.36**

OLCHEMIM CODE: 001 577n
OLCHEMIM BATCH: 577-A
MANUFACTURING DATE: January 2023
EXPIRATION DATE: January 2033
CAS: 900786-14-3
BATCH SIZE: 120 mg

SYNTHESIS

Condensation of kinetin and acetobromoglucose in dimethylformamide. Chromatographically-purified as the peracetate over silica. Deacetylated in methanolic ammonia, re-chromatographed over silica and crystallised from ethanol. A colourless, amorphous solid, soluble in aqueous ethanolic acetic acid.

ANALYSIS

MELTING POINT: 234-235°C (Kofler block)

UV

| | | |
|---|---|---|
| EtOH | $\lambda_{max}$ 297 nm, | $\lambda_{max}$ 251 nm |
| 0.1M aqueous AcOH | $\lambda_{max}$ 289 nm, | $\lambda_{max}$ 242 nm |
| 0.4M ammonia/EtOH | $\lambda_{max}$ 297 nm, | $\lambda_{max}$ 252 nm |

TLC (silica-chloroform/methanol/acetic acid, 75/25/5, v/v), Rf 0.55, purity 95% at 50 µg loading.

TLC (silica-n-butanol/acetic acid/water, 12/3/5, v/v). Major spot Rf 0.50 (α-anomer, purity 96% at 50 µg loading) with very faint spot at Rf 0.43 (ß-anomer, 3%).

ENZYMIC HYDROLYSIS

Kinetin-3-α-D-glucoside incubated with either α-glucosidase (50 mM Na-phosphate buffer, pH 6.7) or ß-glucosidase (30 mM Na-acetate buffer, pH 5.3) for 12 h at 37°C showed no detectable (>10%) hydrolysis of the glucoside to yield kinetin.

ACID HYDROLYSIS

Kinetin-3-α-D-glucoside (2 mg) is completely hydrolysed by heating with 1 M HCl (1 ml) at 100°C for 1 h to give a compound, which co-chromatographs with kinetin.

STORAGE & STABILITY: ACID-LABILE! HYGROSCOPIC!

Store over silica gel in tightly sealed container at –18°C.

FOR LABORATORY USE BY EXPERIENCED PERSONNEL ONLY; NOT FOR DRUG, HOUSEHOLD OR OTHER USES

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