CERTIFICATE OF ANALYSIS

DIHYDROZEATIN
(DZ), $C_{10}H_{15}N_5O$, FW = 221.26

OLCHEMIM CODE 001 060n
MANUFACTURING DATE: November 2025
CAS: 14894-18-9

OLCHEMIM BATCH : DHZ-C
EXPIRATION DATE: November 2034
BATCH SIZE: 25 g

SYNTHESIS
Condensation of 6-chloropurine and (±)-4-amino-2-methylbutan-1-ol in n-BuOH containing triethylamine. Re-crystallised twice from EtOH/acetonitrile (1/2). A colourless, amorphous solid soluble in EtOH.

ANALYSIS
MELTING POINT: 169 – 170°C
UV: Determined after drying to constant weight over phosphorus pentoxide in vacuo.

EtOH	λ_{max} 268 nm (16,800)
50% EtOH/ lM HCl	λ_{max} 270.5 nm (16,300)
50% EtOH/1 M ammonium hydroxide	λ_{max} 272 nm (16,200)
pH 7.2 (50 mM PBS, 0.15 NaCl)	λ_{max} 269.3 nm (17,900)
pH 2 (≅0.1 M HCl)	λ_{max} 276.5 nm (17,800)
pH 11 (≅0.1 M NaOH)	λ_{max} 275.8 nm (17,800)
50% EtOH	λ_{max} 269.4 nm (18,200)

TLC (silica-chloroform/MeOH. 85/15, v/v), Rf 0.50. Purity 98+% at 25 µg and 50 µg loading. No contaminants detected at either load including 6-chloropurine (Rf 0.65).
HPLC (150 x 4.5 mm ODS, 0-30% acetonitrile, 30 min, 2 ml/min), Rt 13.8 min. Purity 98+%.
MASS SPECTROMETRY: Matches the reference spectrum $[M+H]^+$= 222.18 amu, ZMD 2000 (Waters) single quadrupole electrospray MS.
HPLC: Samples were dissolved in mobile phase (initial conditions) and separated on RP-column (150 mm × 4.6 mm, 5µm) (Microsorb C18; Varian). The elution was performed with a methanolic gradient. The flow rate was 0.6 ml/min. The UV absorbance was scanned between 240 – 300 nm. Rt (DHZ) = 10.2 min. Purity > 99+%.
STORAGE & STABILITY: ACID LABILE! HYGROSCOPIC!
Store over silica gel in tightly sealed container at –18°C. No detectable decomposition after 6 months storage under these conditions.
NOTE: For quantitative work, therefore, calculate concentration from UV absorption i.e. 1 OD at 268 nm in ethanol = 13.6 µg/ml.

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

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