CERTIFICATE OF ANALYSIS

ZEATIN RIBOSIDE 5'-MONOPHOSPHATE SODIUM SALT
ZMP, 95+%, FW = 493.33 as disodium monohydrate
FW = 431.35 as free acid
$C_{15}H_{20}N_5Na_2O_8P.H_2O$

OLCHEMIM CODE: 001 514n
OLCHEMIM BATCH: 514-A
MANUFACTURING DATE: May 2024
EXSPIRY DATE: May 2034
CAS: 25615-16-1
BATCH SIZE: 120 mg

SYNTHESIS
Prepared by the condensation of 6-chloropurine riboside 5'-monophosphate and trans-4-amino-2-methylbut-2-enol oxalate in methanol in the presence of triethylamine. Purified by reverse phase and ion exchange chromatography. A light-tan, microcrystalline, very hygroscopic solid, soluble in water and aqueous ethanol. Dissolves readily in water at 10 mg/ml to give a clear, colourless solution.

ANALYSIS
MELTING POINT: ≅ 146°C
UV: Determined after drying to constant weight over phosphorus pentoxide in vacuo.
pH 7.0 (Water) λ_{max} 269 nm (18,500)
pH 2.0 (0.1M HCl) λ_{max} 265 nm (19,000)
pH 11.0 (0.1M NaOH) λ_{max} 269 nm (18,800)
TLC (cellulose-MeOH/isoPrOH/ammonia/water, (9/6/3/2, v/v), Rf 0.18. No contaminants visible at 50 µg loading. No zeatin riboside (ZR) present. Purity 95+%.

HPLC (150 x 2.1 mm ODS, C18- 5µm, 2-90% MeOH/15 mM ammonium formate, 45 min, 0.3 ml/min), Rt 23.65 min, purity 95+%; cis-isomer content (< 1%).
ENZYMATIC HYDROLYSIS
ZMP (1 mg) dissolved in glycine/NaOH buffer (1 ml, pH 10.4) containing alkaline phosphatase (7.5 units) in 0.1 ml buffer. Incubation for 2 h at 37°C gives virtually complete (>98%) removal of phosphate with formation of a compound which co-chromatographed in 15% MeOH/chloroform with authentic ZR. No 6-chloropurine riboside detectable; 6-chloropurine riboside 5'-monophosphate content < 0.1%.

STORAGE & STABILITY
CAUTION. HYGROSCOPIC! DO NOT EXPOSE TO AIR FOR PROLONGED PERIODS.
Store dry over silica gel in tightly sealed container at –18°C. No detectable decomposition expected after 6 months storage under these conditions.
NOTE: For quantitative work, therefore, calculate concentration from UV absorption i.e. 1 OD A= 269 nm in water = 26.8 µg/ml.

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

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