CERTIFICATE OF ANALYSIS

ZEATIN-O-GLUCOSIDE RIBOSIDE (ZROG)

(O-β-D-GLUCOPYRANOSYL-9-β-D-RIBOFURANOSYLZEATIN, *trans*-isomer)

$C_{21}H_{31}N_5O_{10}$, FW = 513.51

OLCHEMIM CODE: 001 513n
OLCHEMIM BATCH: 513-A
MANUFACTURING DATE: December 2024
EXPIRATION DATE: December 2034
CAS: 62512-97-4
BATCH SIZE: 3 g

SYNTHESIS: Condensation of 6-chloropurine-9-β-D-riboside and 4-amino-2-methylbut-2-enyl-β-D-glucopyranoside in the presence of triethylamine. Purified by reverse and normal phase chromatography. Re-crystallised from water/acetonitrile. A colourless, hygroscopic solid, freely soluble in aqueous EtOH.

ANALYSIS
MELTING POINT: Softens at 125°C, then melts without decomp. at 145-150°C.
UV: Determined after drying to constant weight over phosphorus pentoxide in vacuo.

EtOH	λmax 269 nm (19,000)
EtOH/0.1 M HCl	λmax 266 nm (19,240)
EtOH/0.1 M ammonia	λmax 269 nm (17,700)
pH 7.2 (50 mM PBS, 0.15 NaCl)	λmax 269.3 nm (17,900)
pH 2 (≅0.1 M HCl)	λmax 276.5 nm (17,800)
pH 11 (≅0.1 M NaOH)	λmax 275.8 nm (17,800)
50% EtOH	λmax 269.4 nm (18,200)

TLC (silica-nBuOH/AcOH/water, 12/3/5, v/v), Rf 0.38. Purity 95+% at 25 μg loading.

TLC (silica-nBuOH/14 M ammonia/water, 6/1/2, upper phase), Rf 0.18. Purity 95+% at 25 μg loading.
HPLC (15 x 0.45 cm ODS, 5 to 20% acetonitrile over 30 min, 2 ml/min, scan at 270 nm), Rt 15.4 min. Purity 95+%.

Enzymatic hydrolysis: ZROG (1 μmole) incubated with β□glucosidase (30 mM Na-acetate buffer, pH 5.3) for 3 h at 35oC shows >98% conversion into a compound which co-chromatographs in a 1:1 mix with trans-zeatin riboside. Digestion with α-glucosidase (50 mM Na phosphate buffer, pH 6.7) under the same conditions showed <1% production of trans-zeatin riboside.

STORAGE AND 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

OlChemIm s.r.o., Šlechtitelů 27, P.O.Box 22, 770 10 Olomouc, Czech Republic
Tel./Fax: +420 585 427 407
email:info@olchemim.cz, OlChemIm on the Internet: http://www.olchemim.cz