CERTIFICATE OF ANALYSIS

2-METHYLTHIO-*trans*-ZEATIN (2MeSZ)
MW = 265.34

OLCHEMIM CODE: 001 517n
OLCHEMIM BATCH: 517-A
MANUFACTURING DATE: February 2023
EXPIRATION DATE: February 2033
CAS: 29736-33-2
BATCH SIZE: 1.8 g

SYNTHESIS

By condensation of 2-methylthio-6-chloropurine and *trans*-4-amino-2-methylbut-2-enol hydrochloride. Chromatographically purified over silica and re-crystallised 2 times from 50% ethanol. Colourless plates/crystals, soluble in aqueous alcohol.

ANALYSIS

MELTING POINT: 235.5-236.5ºC (Kofler block)

UV

Determined after drying to constant weight over phosphorus pentoxide in vacuo.

EtOH	λ_{max} 241 nm (28,400)	λ_{max} 279 nm (17,000)
EtOH/0.1 M HCl	λ_{max} 252 nm (24,200)	λ_{max} 292 nm (17,400)
EtOH/0.1 M NaOH	λ_{max} 231 nm (34,400)	λ_{max} 286 nm (16,500)

HPLC (30 to 80% acetonitrile, 1 ml/min, 30 min, 25 x 0.4 cm ODS), Rt: MeSZ 7.5 min. No trace of *cis*-isomer. Product co-elutes with authentic compound in 1:1 mix. HPLC purity 98.6%, no contaminants visible, no *cis* (<1%), very sharp peak, *cis/trans* separation checked. TLC: (chloroform/methanol, 9:1). Shows single UV spot on admixing with equal amount of authentic compound (Rf 0.47). No trace of faster running *cis*-isomer. No contaminants visible at 10 µg loading (cis < 1%).

MASS SPETROMETRY: Matches the reference spectrum $[M]^+$= 266.4 amu, ZMD 2000 (Waters) single quadrupole electrospray MS.

STORAGE & STABILITY

Store over silica gel in tightly sealed container at -18ºC. No detectable decomposition after 12 months storage under these conditions.

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

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