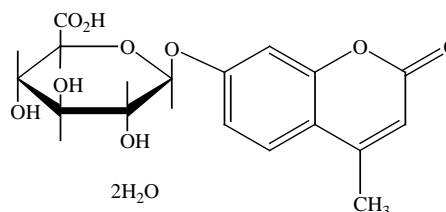


PRODUCT AND SAFETY DATA SHEET

PRODUCT NAME: **MUG** (MUGlcU; 4-MU-glcUA; 4-methylumbelliferyl-β-D-glucuronic acid dihydrate)

CATALOG # **10020**

MOLECULAR INFORMATION: C₁₆H₁₆O₉·2H₂O
MWt: 388.3
[6160-80-1]

**PROPERTIES:**

Color & Form White solid
Solubility Soluble in water at 100mg/mL
Absorption/Emission 360/450 nm
Extinction Coefficient

STORAGE AND HANDLING:

Store at 4°C. For long-term storage, store at -20°C. MUG at 100 mg/100 ml of H₂O plus 2 drops of Triton X-100, which is sterile filtered, is stable for 6 months when stored refrigerated.

APPLICATION:

MUG is a fluorogenic β-glucuronidase substrate that releases the blue fluorescent 4-methyl-7-hydroxycoumarin ($\lambda_{ex}/\lambda_{em} = 360/450$ nm) on enzymatic hydrolysis. The substrate is commonly used for identifying *E. coli* contamination and for detecting marker GUS gene expression in plants with high sensitivity.

MUG is also used for identifying *E. coli* contamination in drinking water and for rapid bacterial identification in blood cultures.

Ref: *BioTechnique* 8, 39(1990); *Plant Mol. Biol. Rep.* 5, 387(1987)

TOXICITY:

Not established. Not listed by NTP, IARC or OSHA.

FIRST AID:

Potentially harmful. Avoid prolonged or repeated exposure. Avoid getting in eyes, on skin, or on clothing. Wash thoroughly after handling. If eye or skin contact occurs, wash affected areas with plenty of water for 15 minutes and seek medical advice. In case of inhaling or swallowing, move individual to fresh air and seek medical advice immediately.

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