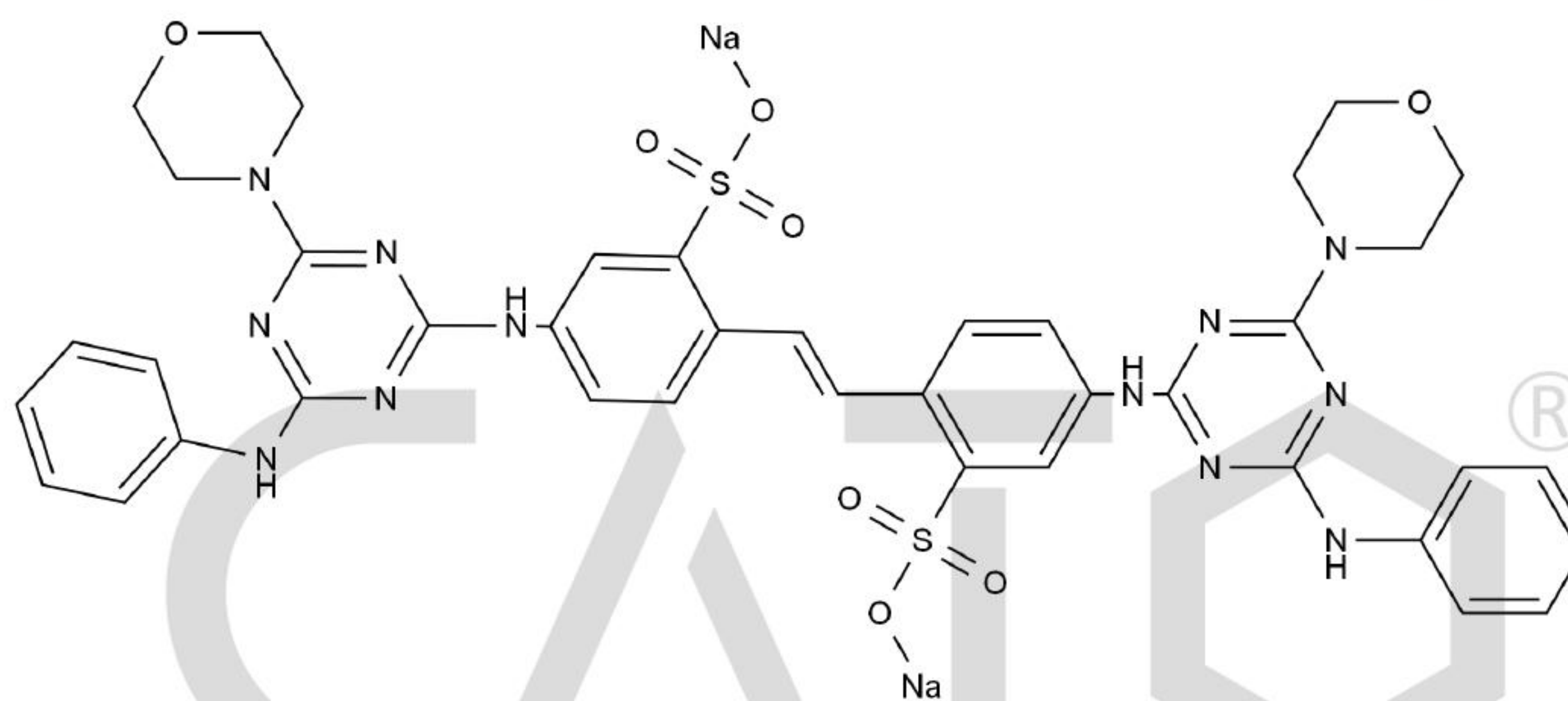


Certificate of Analysis

Reference Material & Standard

Product Name:	Fluorescent Brightener 33	Catalogue Number:	CWLT600705
Synonyms:	N/A	Lot Number:	0525-RE-0065
CAS Number:	61902-19-0	Expiry Date:	May 28, 2027
Molecular Formula:	C ₄₀ H ₃₈ N ₁₂ Na ₂ O ₈ S ₂	Storage:	2°C ~ 8°C Protected from light and Sealed
Molecular Weight:	924.91	Warning:	

Chemical Structure:



Test Items	Method	Results
Appearance	Visual inspection	Yellow Powder
Identification	LCMS&HNMR	Confirmed
Purity	ELSD	100.000%
Loss On Drying	TGA	1.0200%
Assay		99.0%
Uncertainty		±2.0%

Comment:

1. The calculation of the 100% method follows the formula (calculated on the non-dried basis):

Assay (%) = (100% - Loss On Drying) * Purity ELSD (%) / 100%

Loss On Drying is considered as absolute effect, ELSD purity is considered as relative effect.

2. The uncertainty values are the expanded uncertainty and represent an estimated standard deviation equal to the positive square root of the total variation of the uncertainty of components. A normal distribution is assumed and a coverage factor of K=2 is chosen using approximately a 95% confidence level.

Signature:

Prepared by:

Hin Lam

Reviewed by:

Lisa

Approved by General Manager:

David

Date: May 29, 2023

Date: May 30, 2023

Date: May 30, 2023

