



UNITED SCIENCE

500 Simmon Drive, Osceola WI 54020

CERTIFICATE OF ANALYSIS

CUSTOMER:	United Science	CERTIFICATION DATE:	18DEC2023
PRODUCT NAME:	ultrapure vanilla oleoresin	MANUFACTURE DATE:	13DEC2023
PACKAGE SIZE:	5ml brown vial	RECERTIFICATION DATE:	Not Applicable
BEST BY DATE:	13DEC2028	LOT NUMBER:	N/A
DESCRIPTION	5ml liquid extracted/diluted from scCO2 extractant of vanilla beans		
STORAGE CONDITIONS:	Store at room temperature, avoid exposure to direct sunlight		

IDENTITY TEST - organoleptic properties testing			
TEST DESCRIPTION	SPECIFICATION	RESULTS	STATUS
ASSAY (BY HPLC)	VANILLIN	AS REPORTED	PASS
APPEARANCE	5ML BROWN VIAL	AS REPORTED	PASS
COLOR	LIGHT YELLOW	AS REPORTED	PASS
ORGANOLEPTIC	SWEET SMELL, ODOR OF VANILLA FLAVOR	AS REPORTED	PASS

Production Specifications	
Chemical Name	N/A
Empirical Formula	N/A
Declaration	
USA	Natural
EU	Natural Flavoring Preparation
Appearance	Brown liquid; material must be properly mixed, with possible application of heat before use to homogenize
Odor	Vanilla
Melting point (for solids only)	N/A
Boiling point	N/A
Flash Point	49 °C
Specific Gravity @20 °C	1.090-1.170
Refractive index @20 °C	1.425-1.485
Vanillin Content	12-26%
Solubility	Partly soluble in water; soluble in most organic solvent
Storage and shelf life	In tightly closed container away from light and source of ignition at max. 20 °C; 12 months.
FEMA No.:	N/A

CFR No.:	182.20
EINECS No.	N/A
CAS No.	N/A
CoE No	N/A

QUALITY APPROVED

DATE: December 18, 2023

Lab Director, BINGWEN YAN, PhD *Bingwen Yan, PhD*

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