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Certificate of Analysis

PRODUCT Valerian (Valeriana officinalis) Roo

PART NUMBER 00034900

REFERENCE TYPEBiomass Reference Material (BRM) *

LOT NUMBER 00034900-113

COMMON NAME Valerian

LATIN NAME Valeriana officinalis L. [Valerianaceae]

PLANT PART Root

CDXA NUMBER CDXA-08-3048

REPORT NUMBER CDXA-BRMR-091-02

DATE OF SAMPLE 10/18/2002

DATE OF RE-EVALUATION 07/19/2013 (1st); 06/21/2018 (2nd)

DATE OF REPORT 09/19/2018

ANALYTICAL RESULTS

TEST	METHOD	RESULT
Appearance	Macroscopy	(1) Light brown powder
Anatomy/Morphology	Microscopy	(1) Pitted and reticulated vessels (200X)(2) Fragment of epidermis showing sinuous walls(100X)
HP-TLC	CDXA-TLCM-079-02	Conforms

STORAGE CONDITIONS

STORAGE 20-30 °C; Dry storage area; Insect free; Volatile free

EXPIRATION DATE 06/2023 under the above conditions

^{*}Note - Biomass Reference Material (BRM) is not a voucher specimen



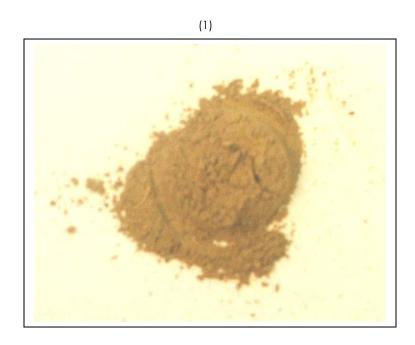




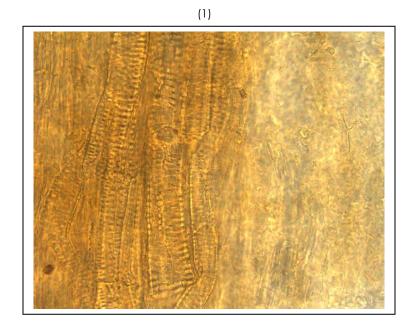
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MACROSCOPY



MICROSCOPY











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HP-TLC CONDITIONS

STATIONARY PHASE Silica gel 60, F₂₅₄, 10 x 10 cm HP-TLC plates

SAMPLE PREPARATION 0.5 g + 5 mL dichloromethane sonicate in room temperature water ~10

minutes then filtered through a 0.45 µm PTFE syringe filter.

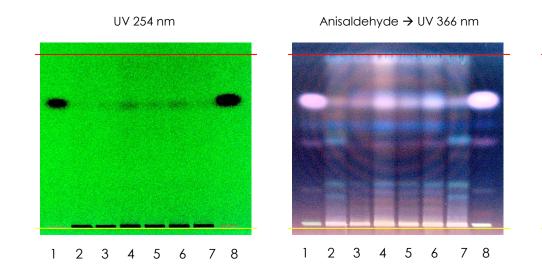
MOBILE PHASE Hexane/ ethyl acetate/ acetic acid [13/7/0.1]

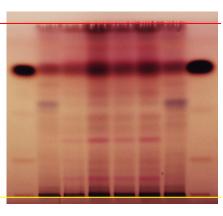
CHAMBER TEMPERATURE Ambient

DETECTION (1) UV 254 nm

(2) Anisaldehyde → UV 366 nm(3) Anisaldehyde → White Light

HP-TLC PLATES





5

7

3

Anisaldehyde → White light

YELLOW LINE = SAMPLE ORIGIN
RED LINE = SOLVENT FRONT @ 70 mm

HP-TLC LANE APPLICATIONS

Lane	ID	Lane	ID			
1	Valerenic Acid	5	Valeriana officinalis BRM			
2	Valeriana officinalis Reference extract	6	Valeriana officinalis BRM			
3	Valeriana officinalis BRM	7	Valeriana officinalis Reference extract			
4	Valeriana officinalis BRM	8	Valerenic Acid			







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REVISION HISTORY

Revision History	<u>Date of Revision</u>	<u>Document/Changes</u>
00	12/12/2008	New report
01	07/09/2013	Passed re-evaluation; updated expiration date; general template update
02	09/19/2018	Passed second reevaluation by HP-TLC. Updated expiration date, HP-TLC conditions, HP-TLC plates, and detection.