

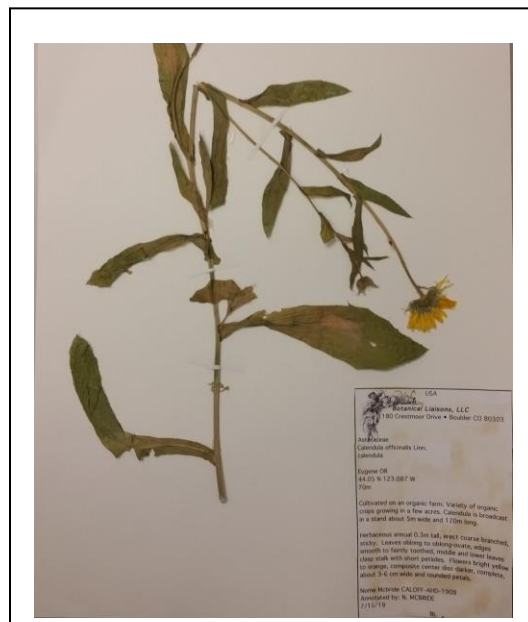
Certificate of Analysis

For Laboratory Use Only

PRODUCT	<i>Calendula officinalis</i> (Marigold) Flower
PART NUMBER	00030390
REFERENCE TYPE	Biomass Reference Material (VBRM) *
LOT NUMBER	00030390-519
COMMON NAME	Marigold
LATIN NAME	<i>Calendula officinalis</i> L.[Asteraceae]
PLANT PART	Flower
CDXA NUMBER	CDXP-19-00526
REPORT NUMBER	CDXA-VBRMR-197-00
DATE OF SAMPLE	09/03/2019
DATE OF REPORT	10/30/2019

*Note – Vouchered (V) BRM is a voucher specimen

A full-size color voucher copy may be purchased by contacting the ChromaDex sales office



ANALYTICAL RESULTS

TEST	METHOD	RESULT
Appearance	Macroscopy	(1) Whole/Cut: Whole/Cut: Whole yellow/orange flowers with short green calyxes and many petals
Anatomy/Morphology	Microscopy	(1) Fragmented, glandular trichome (2) Covering trichomes biserial, multicellular and conical
HP-TLC	CDXA-TLCM-131-01	Conforms

STORAGE CONDITIONS

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

EXPIRATION DATE 09/2024 under the above conditions

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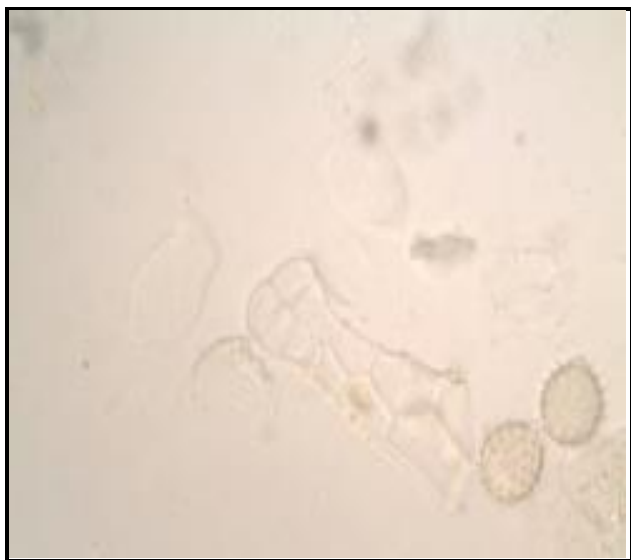
MACROSCOPY

(1)



MICROSCOPY

(1)



(2)



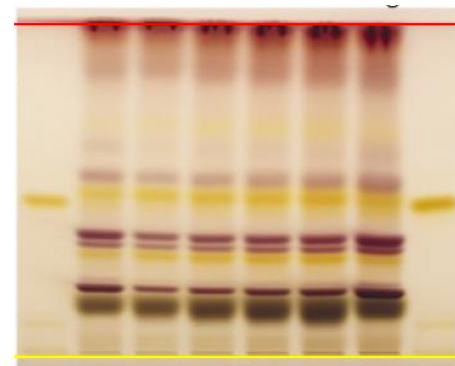
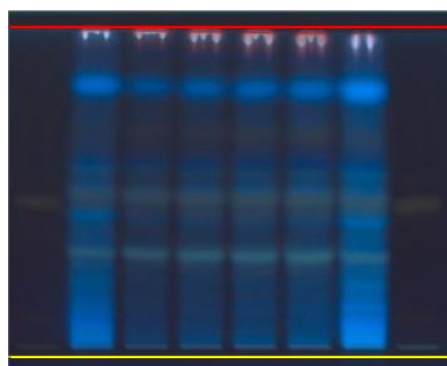
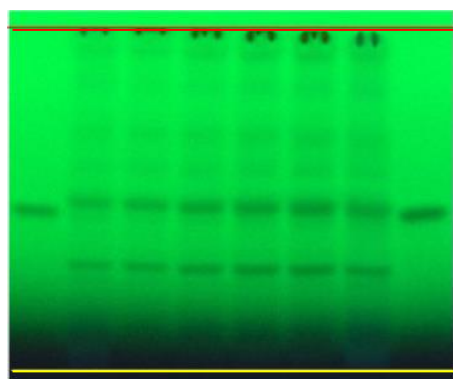
HP-TLC CONDITIONS

STATIONARY PHASE	Silica gel 60, F ₂₅₄ , 10 x 10 cm HP-TLC plates
SAMPLE PREPARATION	0.5 g + 5 ml methanol, sonicated in hot water bath for ~10 minutes and filtered through a 0.45µm PTFE filter.
MOBILE PHASE	Ethyl acetate/ formic acid/ acetic acid/ Milli-Q water [10/1.1/1.1/2.6]
CHAMBER TEMPERATURE	Ambient
DETECTION	(1) UV 254 nm (2) 5% H ₂ SO ₄ /MeOH → UV 366 nm (3) 5% H ₂ SO ₄ /MeOH → White light

HP-TLC PLATES

UV 254 nm

5% H₂SO₄/MeOH → UV 366nm

5% H₂SO₄/MeOH → White light


1 2 3 4 5 6 7 8

1 2 3 4 5 6 7 8

1 2 3 4 5 6 7 8

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

HP-TLC LANE APPLICATIONS

Lane	ID	Lane	ID
1	Rutin	5	<i>Calendula officinalis</i> VBRM
2	<i>Calendula officinalis</i> Reference extract	6	<i>Calendula officinalis</i> VBRM
3	<i>Calendula officinalis</i> VBRM	7	<i>Calendula officinalis</i> Reference extract
4	<i>Calendula officinalis</i> VBRM	8	Rutin

REVISION HISTORY

<u>Revision History</u>	<u>Date of Revision</u>	<u>Document/Changes</u>
00	10/30/2019	New report