



SPECIMEN

For Laboratory Use Only

Certificate of Analysis

PRODUCT	Zingiber officinale (Ginger) Rhizome
PART NUMBER	00030290
REFERENCE TYPE	Biomass Reference Material (BRM) *
LOT NUMBER	00030290-501
COMMON NAME	Ginger
LATIN NAME	Zingiber officinale Roscoe [Zingiberaceae]
PLANT PART	Rhizome
SAMPLE NUMBER	CDXA-14-2775
REPORT NUMBER	CDXA-BRMR-150-02
DATE OF SAMPLE	05/13/2014
DATE OF REEVALUATION	11/06/2018 (1st); 10/12/2022 (2nd)
DATE OF REPORT	10/28/2022

*Note – Biomass Reference Material (BRM) is not a voucher specimen

ANALYTICAL RESULTS

TEST	METHOD	RESULT
Appearance	Macroscopy	(1) Whole/Cut: Tan-yellow chunks of root (2) Milled: Tan powder
Anatomy/Morphology	Microscopy	 Periderm cork from a transverse section under a polarity filter Undulating vessel seen from a transverse section
HP-TLC	See HP-TLC conditions	Conforms

STORAGE CONDITIONS

- **STORAGE** 20-30 °C; Dry storage area; Insect free; Volatile free
- **EXPIRATION DATE** 10/2027 under the above conditions





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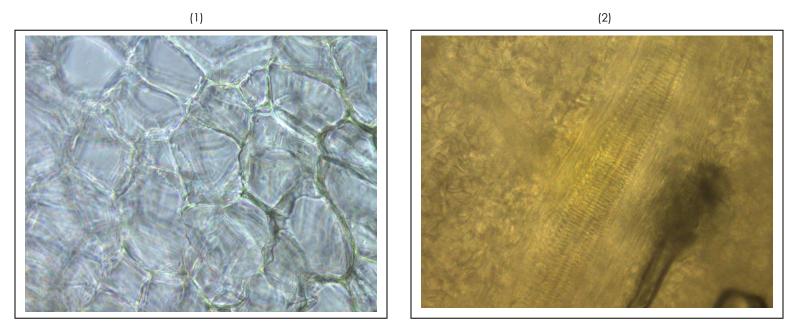
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MACROSCOPY



MICROSCOPY







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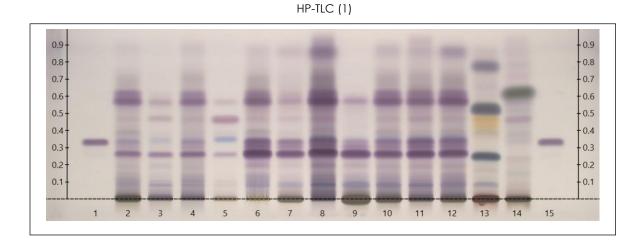
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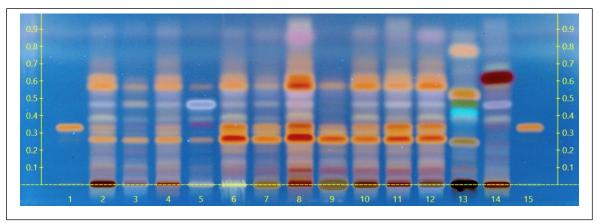
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HP-TLC CONDITIONS STATIONARY PHASE Silica gel 60, HPTLC plates SAMPLE PREPARATION 0.3 g + 3 mL 70% grain Ethanol, sonicate/heat at 50 °C for 30 min. MOBILE PHASE Toluene: Ethyl acetate [7.5/2.5] (1) Vanillin/Sulfuric, 110 °C, 2 min, visible light (2) Vanillin/Sulfuric, 110 °C, 2 min, 366 nm

HP-TLC PLATES











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Lane	ID	Lane	ID
1	10-Gingerol, methanol (2 µL)	9	N/A
2	Zingiber officinale (root) (6 µL)	10	Zingiber officinale BRM (6 µL)
3	Zingiber officinale (root) (6 µL)	11	N/A
4	Zingiber officinale (rhizome) (6 µL)	12	N/A
5	N/A	13	Alpinia Officinarum (rhizome) (6 µL)
6	N/A	14	Alpinia galanga (rhizome) (6 µL)
7	N/A	15	10-Gingerol, methanol (2 µL)
8	N/A	16	N/A

HP-TLC LANE APPLICATIONS

REVISION HISTORY

<u>Revision History</u>	Date of Revision	Document/Changes
00	08/04/2014	New report
01	12/04/2018	Material passed reevaluation by HP-TLC. Updated expiration date and template.
02	10/28/2022	Material passed reevaluation by HP-TLC. Updated HP-TLC plates, conditions, and lane assignments. Added image of ground material and updated expiration date and template.