

PRODUCT	Citrus sinensis (Orange) Peel
PART NUMBER	00030130
REFERENCE TYPE	Biomass Reference Material (BRM) *
LOT NUMBER	00030130-268
COMMON NAME	Orange
LATIN NAME	Citrus sinensis (L.) Osbeck [Rutaceae]
PLANT PART	Peel
SAMPLE NUMBER	CDXA-08-0446
REPORT NUMBER	CDXA-BRMR-058-03
DATE OF SAMPLE	03/06/2008
DATE OF REEVALUATION	04/05/2013 (1 st); 04/11/2017 (2 nd); 05/03/2021 (3 rd)
DATE OF REPORT	05/20/2021

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

ANALYTICAL RESULTS

TEST	METHOD	RESULT
Appearance	Macroscopy	(1) Whole/Cut: Light yellow/ orange dried peel pellets (2) Milled: Yellow powder
Anatomy/Morphology	Microscopy (400x)	(1) Epidermis of fruit showing small thick-walled cells with (2) numerous oil droplets
HP-TLC	See HP-TLC conditions	Conforms

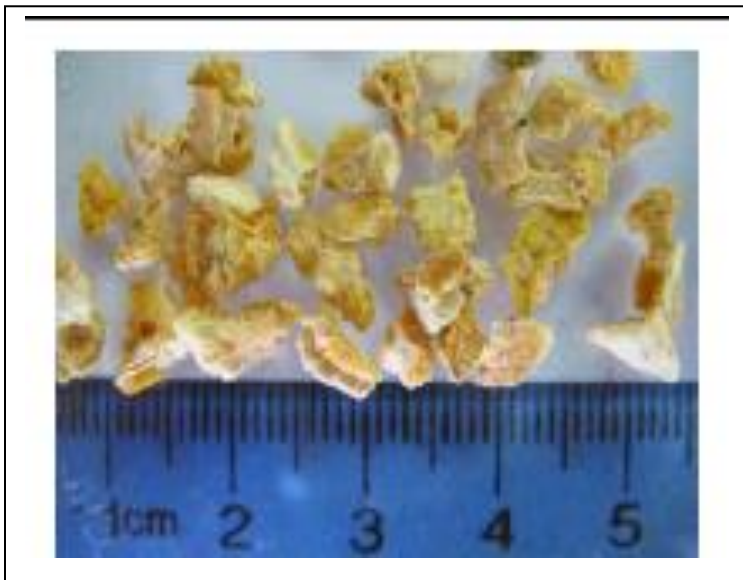
STORAGE CONDITIONS

STORAGE	20-30 °C; Dry storage area; Insect free; Volatile free
EXPIRATION DATE	05/2026 under the above conditions

This document is the property of ChromaDex, Inc. and/or its relevant affiliates and contains confidential and proprietary material for the sole use of the intended recipient(s). Any review, use, distribution, or disclosure by or to others is strictly prohibited.

MACROSCOPY

(1)

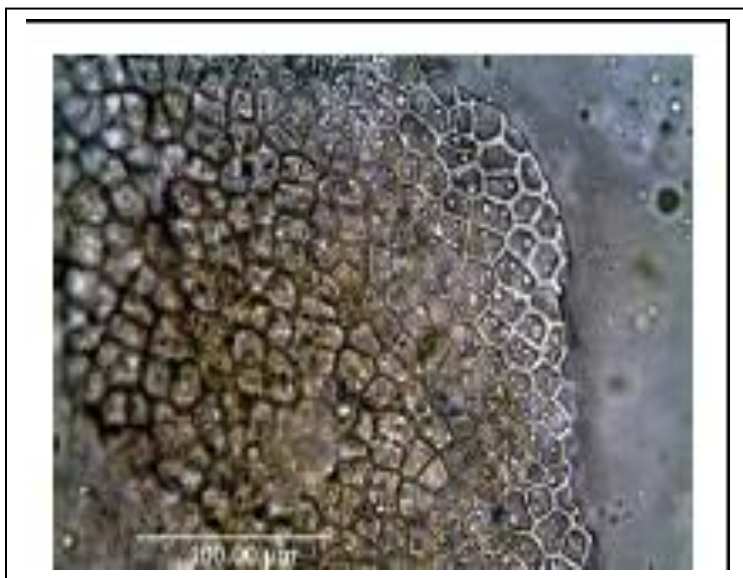


(2)

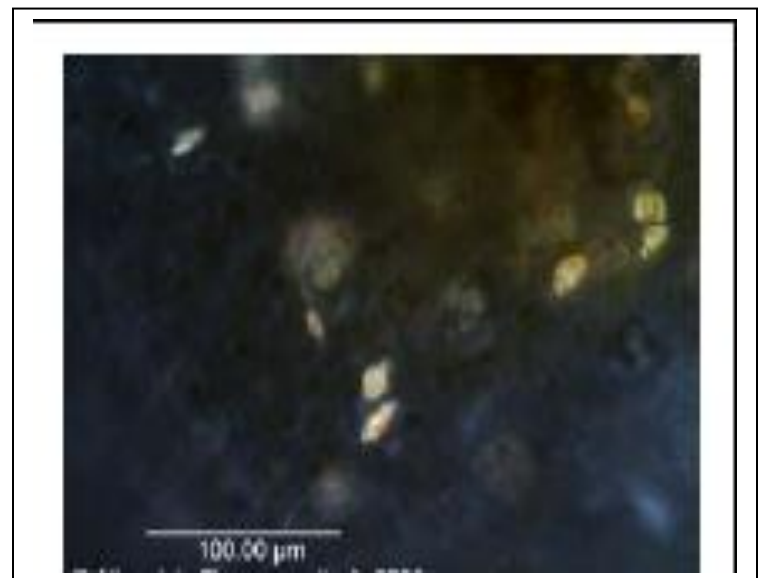


MICROSCOPY

(1)



(2)



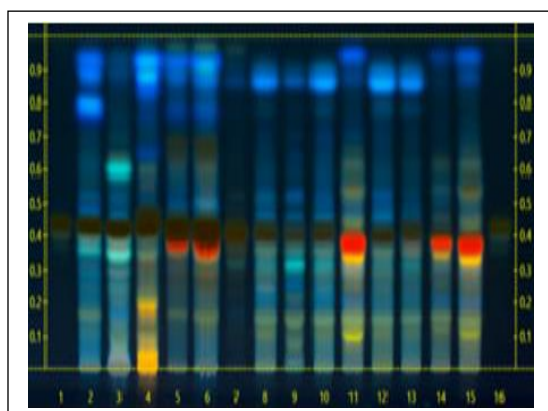
This document is the property of ChromaDex, Inc. and/or its relevant affiliates and contains confidential and proprietary material for the sole use of the intended recipient(s). Any review, use, distribution, or disclosure by or to others is strictly prohibited.

HP-TLC CONDITIONS

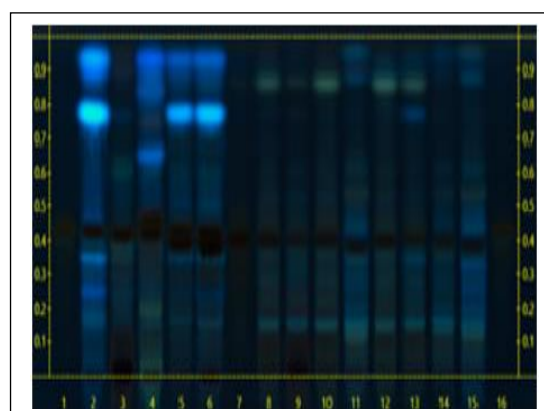
STATIONARY PHASE	Silica gel 60, HPTLC plates
SAMPLE PREPARATION	1 g + 10 mL water, sonicate/heat at 50 °C for 30 min. SPE condition with 5mL methanol, equilibrate with 5mL water, load, dry, elute with 2 x 1 mL MeOH
MOBILE PHASE	Ethyl acetate/ formic acid/ acetic acid/ Milli-Q water [10/1.1/1.1/2.6]
DETECTION	(1) Natural Product + Polyethylene Glycol, 366 nm (2) 10% Sulfuric, 100 °C, 2 min, 366 nm

HP-TLC PLATES

HP-TLC (1)



HP-TLC (2)



HP-TLC LANE APPLICATIONS

Lane	ID	Lane	ID
1	Hesperidin in MeOH (3 µL)	9	NA
2	Citrus maxima skin (10 µL)	10	NA
3	Citrus maxima fruit (10 µL)	11	NA
4	Citrus x aurantium peel (10 µL)	12	Citrus sinensis fruit (10 µL)
5	Citrus x aurantium fruit and rind (10 µL)	13	Citrus sinensis peel (10 µL)
6	NA	14	Citrus limon fruit (10 µL)
7	NA	15	Citrus limon peel (10 µL)
8	Citrus sinensis BRM (10 µL)	16	Naringin in MeOH (3 µL)

REVISION HISTORY

<u>Revision History</u>	<u>Date of Revision</u>	<u>Document/Changes</u>
00	04/14/2008	New report
01	04/05/2013	Passed re-evaluation; updated expiration date; general template update
02	04/17/2017	Passed second re-evaluation; updated expiration date and chromatograms; general template update
03	05/20/2021	Material passed third reevaluation by HP-TLC. Updated expiration date, template, HP-TLC method conditions, plates, and lane applications.

This document is the property of ChromaDex, Inc. and/or its relevant affiliates and contains confidential and proprietary material for the sole use of the intended recipient(s). Any review, use, distribution, or disclosure by or to others is strictly prohibited.