ChromaDex®
Application Note

0072 - Jujube for Saponins by HPLC

Botanical Name: *Ziziphus zizyphus*

Common Names: Jujube, red date, Chinese date

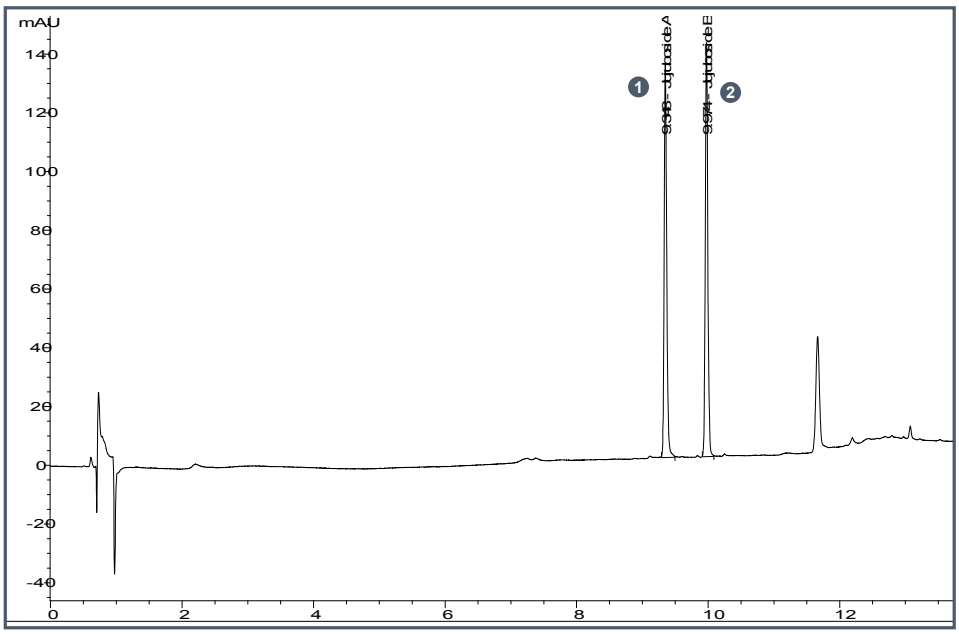
Plant Description:

Ziziphus zizyphus has a wide distribution throughout southern Asia and southeastern Europe. It is a small deciduous tree with thorny branches, typically growing to a height of 5-10 meters. The leaves are shiny-green, with three conspicuous veins at the base and a finely serrated margin. Its flowers are small with five inconspicuous green petals. Fruit comes in the form of a small, edible drupe with the consistency and taste of an apple.

Therapeutic Use Overview:

The fruit of *Ziziphus zizyphus* has long been used in Chinese and Korean traditional medicine. When consumed, the fruit releases a number of compounds including saponins, jujubosides, and triterpenoic acids. The saponins from the jujube herb have been found to have sedative properties when tested on animals. Ziziphin, a compound extracted from the leaves, suppresses the ability to perceive sweet in humans and has anti-obesity characteristics.

Representative HPLC Analysis: Mixed Standard Solution



Analytes:

1 Jujuboside A 2 Jujuboside B

Instrument Parameters

Column:	Phenomenex Luna C18(2)-HST 100 x 2.0 mm, 2.5u
Detection:	UV-Vis @205 nm
Flow Rate:	0.5 mL/min
Injection Volume:	3 µL
Temperature:	50 °C
Mobile Phase A:	0.1% Phosphoric acid
Mobile Phase B:	Acetonitrile

Gradient Program

Time (min)	%A	%B
0.0	90	10
1.0	90	10
9.0	45	55
10.0	5	95
13.0	5	95
14.0	90	10
18.0	90	10

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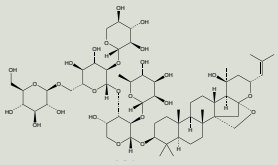
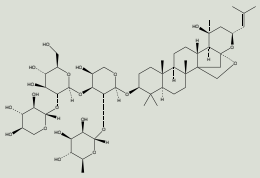
Phytochemical Reference Standards

Product Description And Details	Product ID	Qty
 JUJUBOSIDE A Grade: P CAS#: [55466-04-1] Chemical Formula: $C_{58}H_{94}O_{26}$ FW: 1207.35	ASB-00010525-005 ASB-00010525-010	5mg 10mg
 JUJUBOSIDE B Grade: P CAS#: [55466-05-2] Chemical Formula: $C_{52}H_{84}O_{21}$ FW: 1045.21	ASB-00010526-005 ASB-00010526-010	5mg 10mg

Reference Standards Kits

Product Name	Contents	Product ID	Qty
JUJUBE STANDARDS KIT	JUJUBOSIDE A(P) JUJUBOSIDE B(P)	KIT-00010527-005 KIT-00010527-010	2 x 5mg 2 x 10mg

Botanical Reference Materials

Product Description	Grade	Product ID	Qty
JUJUBE (ZIZIPHUS JUJUBA) FRUIT	RGBRM	ASB-00030358-005	5g
JUJUBE (ZIZIPHUS JUJUBA) SEED	RGBRM	ASB-00030990-005	5g
JUJUBE (ZIZIPHUS SPINOSA) SEED	RGBRM	ASB-00030814-005	5g

Additional Related Compounds

Product Description And Details	Prodcut ID	Qty
JUJUBOSIDE A Grade: RG CAS#: [55466-04-1] Chemical Formula: $C_{58}H_{94}O_{26}$ FW: 1207.35	ASB-00010522-010 ASB-00010525-025	10mg 25mg

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