

Determination of catechins and phenolic acids in red wine by solid phase extraction and HPLC using a novel Thermo Scientific solid core material:
Accucore™ PFP.

Application #463

30 August 2012

Copyright © 2010 Thermo Fisher Scientific Inc.

Exported by Thermo Fisher Scientific Applications Library

Determination of catechins and phenolic acids in red wine by solid phase extraction and HPLC using a novel Thermo Scientific solid core material: Accucore™ PFP.

General Information

Market: Food&Beverage

Matrix: Red Wine

Instrument type: UHPLC

Description

Accucore™ HPLC columns use Core Enhanced Technology™ to facilitate fast and high efficiency separations. The 2.6 μm diameter particles are not totally porous, but rather have a solid core and a porous outer layer. The optimized phase bonding creates a series of high coverage, robust phases. The tightly controlled 2.6 μm diameter of Accucore particles results in much lower backpressures than typically seen with sub-2 μm materials.

Method Details

Instrument parameters

Instrument Parameter	Value
Run Time Length	10.000 min
Mobile_Phase_A	Water + 0.1% Formic Acid
Mobile_Phase_B	Acetonitrile + 0.1% Formic Acid
F;pw_Rate	0.4 mL/min
Column_Temperature	30 °C
Detection	UV 280 nm
Injection_Volume	1 µL

Gradient Details

Ret. Time [min]	Flow [ml/min]	%B [%]	%C [%]	%D [%]
0.000	0.400	2.0	0.0	0.0
0.100	0.400	2.0	0.0	0.0
7.100	0.400	65.0	0.0	0.0
7.200	0.400	95.0	0.0	0.0
7.900	0.400	95.0	0.0	0.0
8.000	0.400	2.0	0.0	0.0
10.000	0.400	2.0	0.0	0.0

Column Details

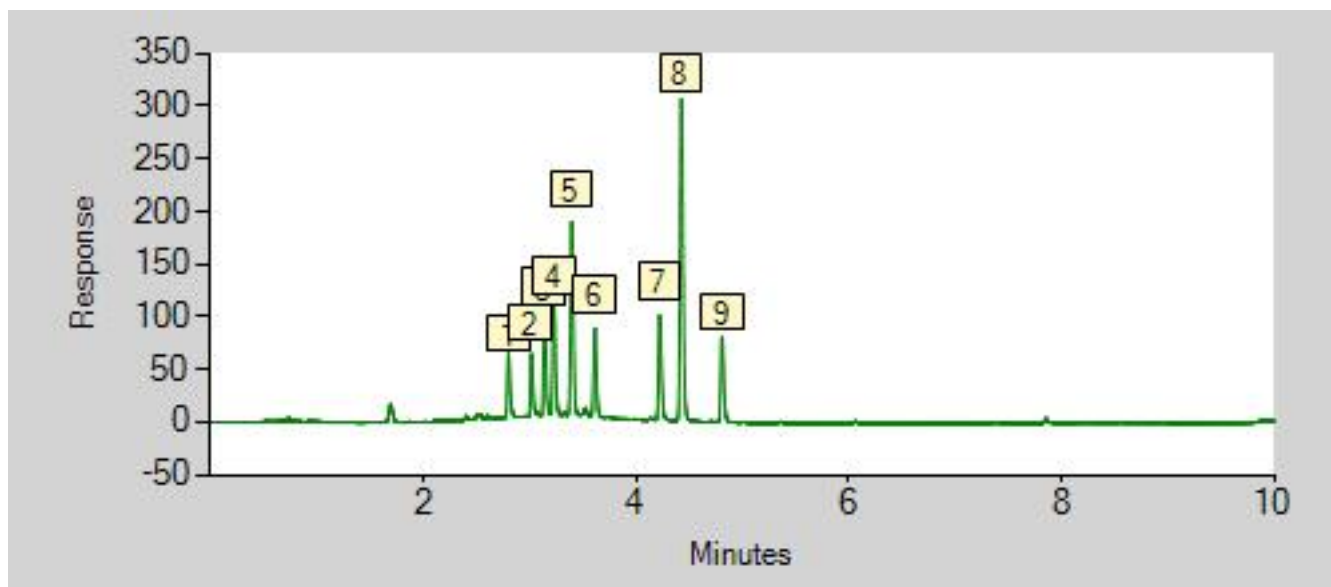
column_A	
Manufacturer	Thermo Fisher Scientific
Model	Accucore RFP
Diameter	2.1
Length	100
Particle Size	2.6
Packing Material	PFP

System information

Instrument Type	UHPLC
UHPLC	Generic

Results

Channel Detector_1_280nm



No	Peak_Name	*Compound _Class	Retention_Ti me	Peak_Area	Peak_Area_p c	Peak_Height	Peak_Height _pc	Plates_(USP)	Resolution_(USP)	Tailing_Facto r_(USP)
1	Catechin	Phenol	2.803	1.786	5.39	60.420	5.59	65482	4.99	1.52
2	Epicatechin	Phenol	3.018	1.576	4.76	58.438	5.40	79757	2.84	1.31
3	Syringic acid	Phenolic Acid	3.141	2.814	8.50	103.023	9.53	83097	2.01	1.33
4	Gallocatechi n gallate	Phenol	3.229	3.103	9.37	107.562	9.95	84521	3.64	1.45
5	Hydroxybenz aldehyde	Phenolic Acid	3.397	5.573	16.83	183.533	16.97	81718	4.59	1.24
6	p-Vanillin	Phenolic Aldehyde	3.615	2.553	7.71	83.862	7.76	92238	12.45	1.21
7	Myricetin	Flavonol	4.225	3.172	9.58	98.836	9.14	112672	4.03	1.33
8	Resveratrol	Phenol	4.428	9.887	29.86	304.918	28.20	122123	7.57	1.25
9	Quercetin	Flavonal	4.811	2.644	7.98	80.693	7.46	145723	n.a.	1.28

Determination of catechins and phenolic acids in red wine by solid phase extraction and HPLC using a novel Thermo Scientific solid core material: Accucore™ PFP. - 7

Appendix

The application can be accessed at <http://dlibrary.dionex.com/Public/View.aspx?ApplicationID=463>

Available Downloads

Filename	Size(bytes)
AN-LC-Accucore-PFP-column-catechins-AN20583_E.pdf	563791

Related Information

No related information available.