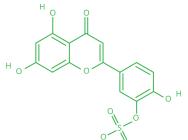
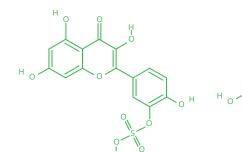
APPLICATION LIST #462

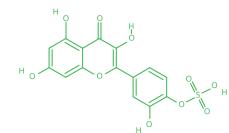
Flavonoids and their sulfated metabolites by HPLC method

Flavonoids have antioxidant and antiviral properties and are widely used as drugs and dietary supplements. Sulfation reaction of flavonoid compounds is part of mammalian metabolism. The presented method allows to separate parent compounds luteolin, quercetin, silychristin and their sulfated derivates in enzymatic sulfation reaction mixtures.

Substance	Luteolin-3'-O-sulfate		
Synonym	Luteolin sulfate		
Substance	Quercetin-3'-O-sulfate, CAS number 62369-28-2		
Substance	Quercetin-4'-O-sulfate, CAS number 695145-26-7		
Synonym	Quercetin sulfate		
Substance	Silychristin-19-O-sulfate		
Synonym	Silychristin sulfate		



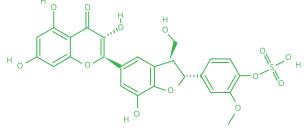




Luteolin-3'-O-sulfate

Quercetin-3'-O-sulfate

Quercetin-4'-O-sulfate



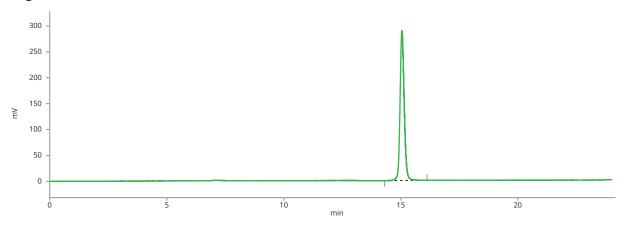
Silychristin-19-O-sulfate

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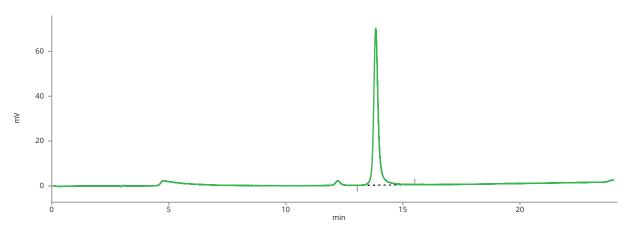
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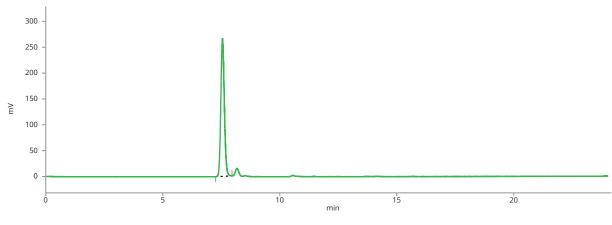
Flavonoids and their sulfated metabolites by HPLC method



Analysis of luteolin sulfate on ARION[®] column



Analysis of quercetin sulfates on ARION[®] column



Analysis of silychristin sulfate on ARION[®] column

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Flavonoids and their sulfated metabolites by HPLC method

Column	ARION® PFP, 5.0 µm				
Dimensions	150 mm × 4.6 mm				
Part number	ARI-5873-LK46				
Mobile phase	A: 10mM Ammonium acetate + 0.1 % HCOOH B: Methanol				
Gradient elution	Time (min)	%A	%B		
	0	60	40		
	20	28	72		
	21	60	40		
	24	60	40		
Flow rate	0.6 mL/min				
Temperature	45 °C				
Detection	DAD at 200–400 nm				
Injection volume	1 μL				
Analytes	1. Luteolin sulfate (at 337 nm) 2. Quercetin sulfate (at 365 nm) 3. Silychristin sulfate (at 267 nm)				

This application was developed by the Laboratory of Biotransformation of the Institute of Microbiology of the Czech Academy of Sciences.



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