

Quantitative UV HPLC Analysis of Vitamin C in Juices on Amaze HA Column

Equipment

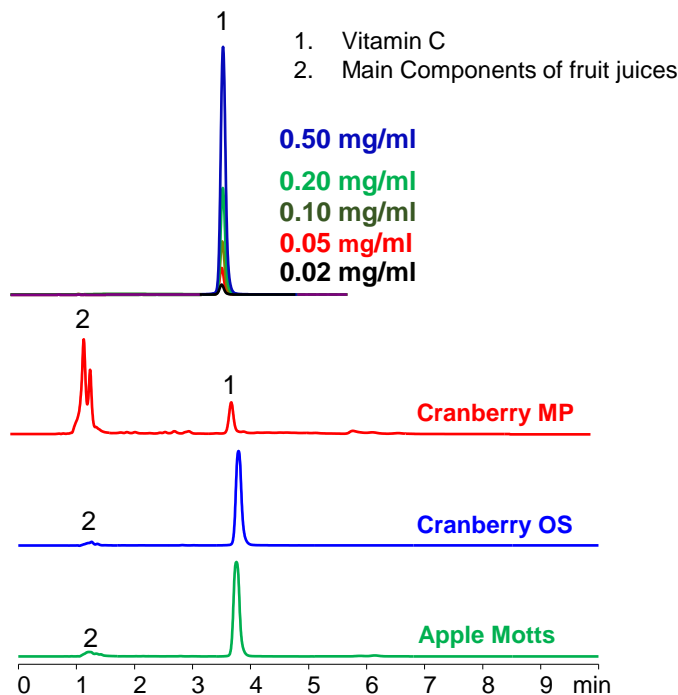
Agilent 1100 HPLC system with DAD
Analytical Balance
HPLC Column: Amaze HA, 3.0x100 mm, 3 um, 100A

Materials:

Fruit juices
ACN (Tedia, catalog #AS1127)
Distilled water (Aldrich, catalog #270733)
Ammonium acetate (Aldrich, catalog #7262)
Acetic acid (Aldrich, catalog #6283)
Vitamin C (Aldrich, catalog #A92902)

Method Description

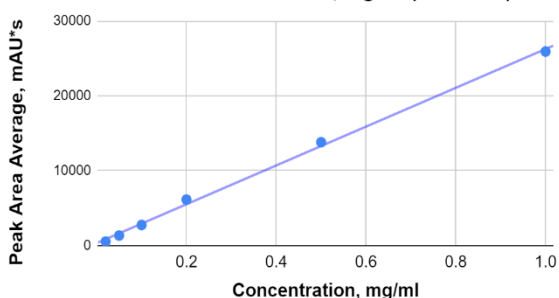
HPLC Pump set up: **A:** DI water, **B:** Acetonitrile, **C:** 100 mM Ammonium acetate pH 4
Mobile phase: 60% ACN with 10 mM ammonium acetate pH 4.0 buffer
Mobile phase composition: : **A:** 30%, **B:** 60%, **C:** 10%



Column: Amaze HA
Dimensions: 3.0 x 100 mm, 3 um, 100A
Mobile phase: 60% ACN with 10 mM AmAc pH 4
Flow: 0.5 ml/min
Detection: 275 nm
Sample: Standards and juices

Vitamin C Calibration and Sample Analysis

Calibration Plot for Vitamin C, mg/ml (RSD 0.99)



Concentration, mg/ml	Peak Area Average, mAU*s	Peak Area, Inj. 1, mAU*s	Peak Area, Inj. 2, mAU*s	Peak Area, Inj. 3, mAU*s	Concentration of Vitamin C, mg/ml
0.02	548	542	555	547	-
0.05	1352	1359	1315	1382	-
0.1	2759	2750	2811	2717	-
0.2	6149	6143	6156	6148	-
0.5	13809	13875	13783	13768	-
White Grape MP	13792	13813	13888	13675	0.52
Apple Mott's	20886	20919	20884	20855	0.79
Cranberry OS	19377	19462	19348	19321	0.73
Cranberry MP	1205	1197	1208	1211	0.03
Lemon Motts	6691	6709	6678	6686	0.24
Lime Motts	6756	6773	6739	6756	0.25