

Reveleris® X2 Flash System

Reveleris® X2 Flash System Isolates Aminosugar, Acarbose, along with its Sugar Components

Introduction

Acarbose, an inhibitor of α -glucosidase, is used in the treatment of diabetic patients due to its significant effect in lowering blood glucose.¹ Further development of this drug with voglibose than valienamine leads to a more potent drug that has been found to be more effective as an enzyme inhibitor than acarbose.

Flash Chromatography Conditions:

Cartridge: Reveleris® amino 12g
Flow Rate: 36mL/min
Equilibration: 10.0 min
Run Length: 15.0 min
UV1 Wavelength: 220nm
UV2 Wavelength: 254nm
Solvent A: Water with 0.1% TFA
Solvent B: Acetonitrile

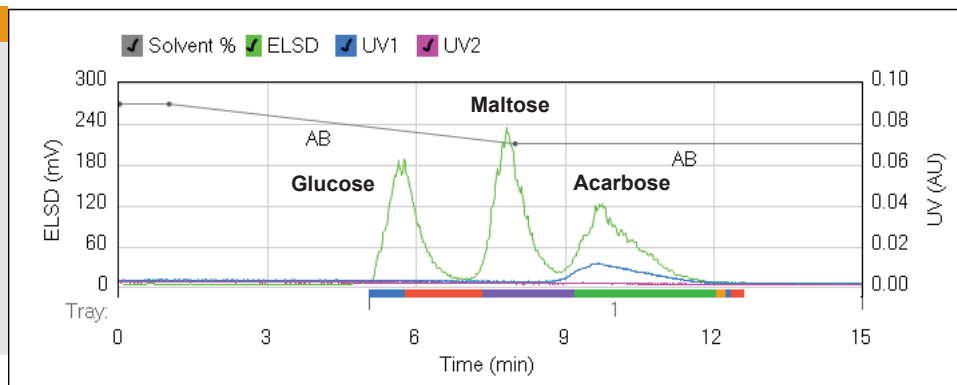
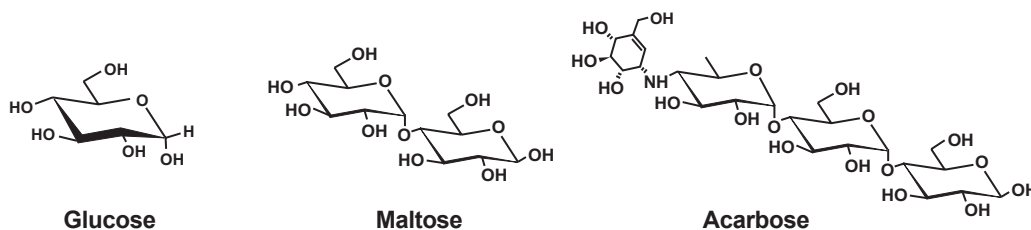


Figure 1: Using the RevealX™ technology, all three compounds can be detected during separation

Gradient Table

Step	Time (min.)	%B
1	0.0	90
2	1.0	90
3	7.0	70
4	7.0	70



Conclusion

Using the Reveleris® amino phase cartridge and the RevealX™ technology, acarbose (25mg) can be purified from its sugar components, glucose and maltose, during its synthesis. Using the dual detection with UV and ELSD along with the sensitivity of the Reveleris® X2 flash instrument, both non-chromophoric and low levels of these compounds can be detected and isolated during a single run.

References

1. Medicinal natural products; a biosynthetic approach, 3rd edition; Dewick, P.; John Wiley & Sons, Inc., Hoboken, New Jersey, 2009.

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