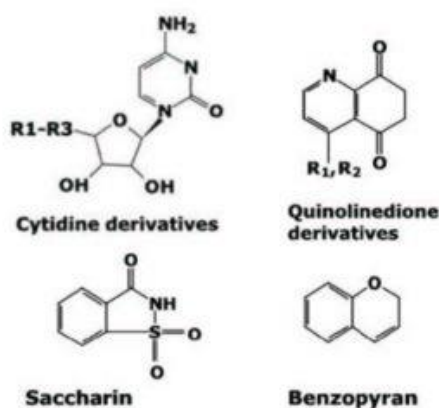
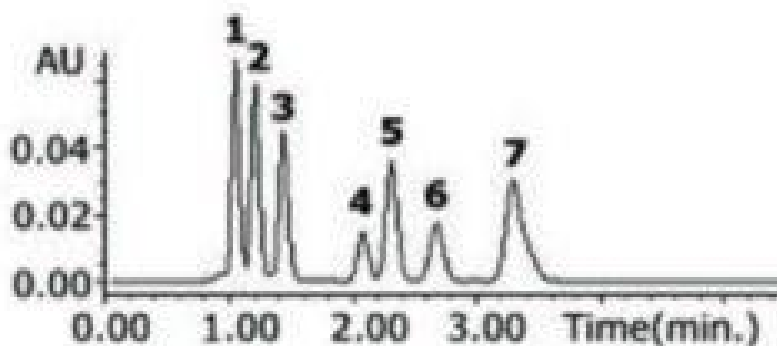


## Cytidine Based Cancer Prodrug Analyzed with HPLC – AppNote

### Separation Achieved with Shape Selectivity and Hydrophobic Interaction

This Method provides an example of Reversed Phase Separation containing a number of related compounds. The properties of the solutes are listed in the Table below.

When comparing the properties of Compounds 2 and 3, it is interesting to note that 2 is more hydrophobic than 3 but its Retention is shorter. The Method uses Shape Selectivity as well as Hydrophobic Interaction which may explain why the less hydrophobic compound is retained longer. In general, the more polar compounds elute earlier than the more hydrophobic species. Compound 7 has no polar functionalities at all so it is the most retained under Reversed Phase conditions.



#### Peaks:

1. Cytidine-R1
2. Cytidine-R2
3. Cytidine-R3
4. Quinolinedione-R1
5. Saccharin

6. Quinolinedione-R2

7. Benzopyran

## Method Conditions

**Column:** Cogent UDC Cholesterol™, 4µm, 100Å

**Catalog No.:** 69069-7.5P

**Dimensions:** 4.6 x 75mm

**Mobile Phase:** 60:40 Acetonitrile / DI Water + 0.5% Perchloric Acid

**Injection vol.:** 5µL

**Flow rate:** 1mL / minute

**Detection:** UV @ 270nm

**Sample Preparation:** 1mg / mL of each in Acetonitrile + DI Water

**Table:**

Solute	Mol Wt.	B pKa	Log P
Cytidine-R1	397	3.73	1.54
Cytidine-R2	454	3.73	3.66
Cytidine-R3	425	3.73	2.66
Quinolinedione-R1	536	-	3.46
Saccharin	536	5.36	2.96
Quinolinedione-R2	520	-	2.74
Benzopyran	396	-	2.80



**Attachment Cancer Prodrug Analyzed with HPLC pdf 0.2 Mb** [Download File](#)

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**MicroSolv Technology Corporation**

9158 Industrial Blvd. NE, Leland, NC 28451

Tel: (732) 380-8900

Fax: (910) 769-9435

Email: [customers@mtc-usa.com](mailto:customers@mtc-usa.com)

Website: [www.mtc-usa.com](http://www.mtc-usa.com)