

## Test Report of Curcuminoids

### I. Sample Molecular Formula

Name	Molecular Formula
Curcumin	C <sub>21</sub> H <sub>20</sub> O <sub>6</sub>
Demethoxy Curcumin	C <sub>20</sub> H <sub>18</sub> O <sub>5</sub>
Bisdemethoxy Curcumin	C <sub>19</sub> H <sub>16</sub> O <sub>4</sub>

### II. Sample Information

Chemical Name : Curcuminoids  
Trade Name : (unmentioned)  
Test Type : Identification and content of Curcuminoids  
Manufacturer : (unmentioned)

### III. Chromatographic System

Source of method : Self developed  
Column : Ultisil™ UHPLC Polar RP, 1.8 µm, 2.1×50 mm  
Detector : UV 425 nm  
Separation Mode : Isocratic  
Mobile Phase : 60% Acetonitrile in 0.25% Acetic Acid  
Temperature : Ambient (nominally 25 °C)  
Flow Rate : 0.2 ml/min  
Injection Volume : 1.00 µl

Procedure:

- **Mobile Phase:**  
Prepare 60% Acetonitrile in 0.25% Acetic Acid, filter through 0.2 µm membrane.
- **Standard solution:**
  1. Accurately weight 2.5 mg of curcuminoid standard, put it in 25 ml volumetric flask, dilute it with Methanol to the volume.
  2. Prepare 1 ppm, 2 ppm, 5 ppm, 10 ppm, 15 ppm and 20 ppm of standard solution from the solution above.
  3. Filter all solution through 0.2 µm syringe filter.
  4. Put it in a vial.

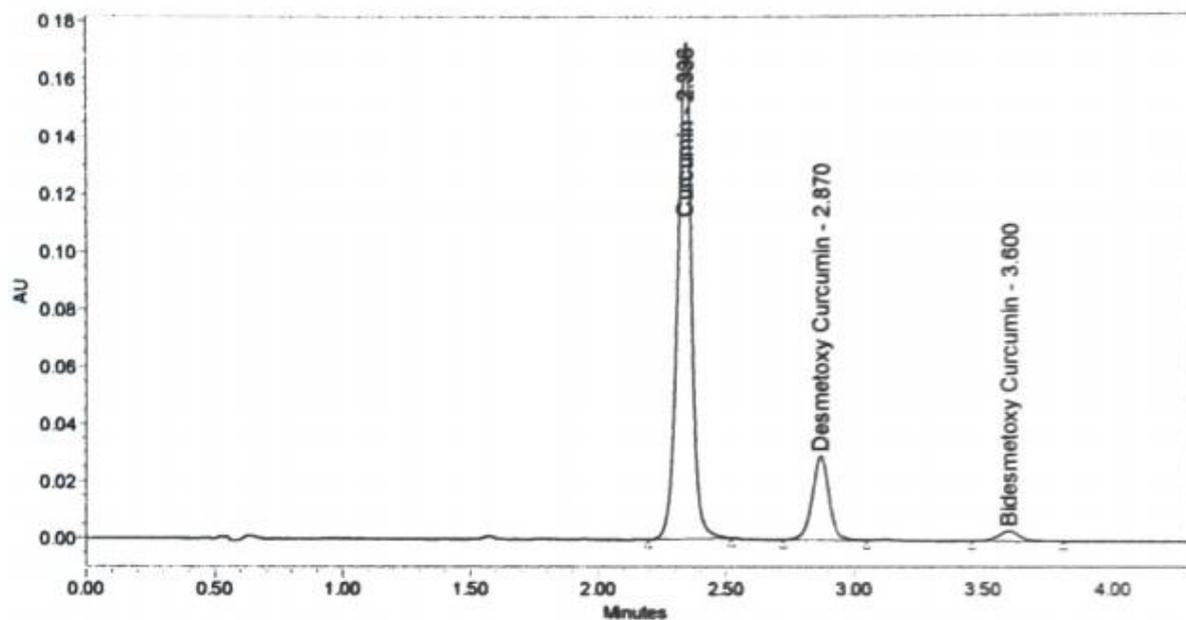
- **Sample solution:**

1. Accurately weight 20 mg extract of Curcumin, put it in 10 ml volumetric flask, dilute it with Methanol to the volume.
2. Sonicate the flask for 15 minutes.
3. Filter the solution through a filter paper, and put it in a reaction tube.
4. Filter it again through a 0.2  $\mu\text{m}$  syringe filter.
5. Put it in a vial.

- **Suitability requirements:**

1. Resolution, NLT 3.0.
2. Plate count of each peak, MT 5000 plates.

#### IV. Chromatogram and Results



	Peak Name	RT	USP Plate Count	K Prime	Resolution	Area	% Area	Height
1	Curcumin	2.336	9504	2.81		654718	80.80	173172
2	Desmethoxy Curcumin	2.870	9769	3.68	5.11	134787	16.63	29510
3	Bidesmethoxy Curcumin	3.600	11261	4.87	5.69	20810	2.57	3585