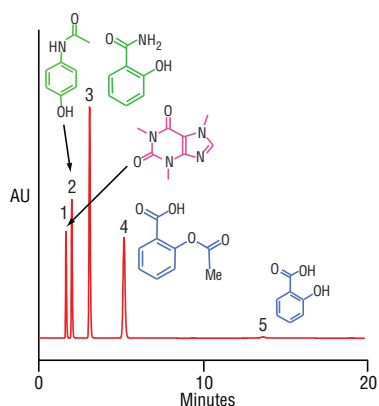


## Analysis of APIs in a Pain-Relief Medicine on a Thermo Scientific™ Acclaim™ Mixed-Mode WAX-1 Column



Column: Thermo Scientific™ Acclaim™  
Mixed-Mode WAX-1, 5 µm  
Dimension: 4.6 × 150 mm  
Mobile Phase: 40/60 v/v Acetonitrile/buffer  
(6.8 g  $\text{KH}_2\text{PO}_4$  and  
0.5 g  $\text{NaP}_2\text{O}_7 \cdot 10\text{H}_2\text{O}$  in  
1000 g D.I.  $\text{H}_2\text{O}$ ,  
pH is adjusted to 6.0 with NaOH)

Temperature: 30 °C  
Flow Rate: 1 mL/min  
Inj. Volume: 1 µL  
Detection: UV @ 220 nm  
Note: Pyrophosphate in the buffer suppresses  
interference from metal ions

Peaks:  
1. Caffeine  
2. Acetaminophen  
3. Salicylamide  
4. Acetyl salicylic acid (Aspirin)  
5. Salicylic acid

Sample Preparation:  
1. A 500 mg tablet is ground into fine powder.  
2. Weigh 400 mg of the powder and dissolve with  
40 g of D.I. water.  
3. After sonicating for 5 min, the resulting suspension  
was filtered with 0.45 µm membrane filter.  
4. Dilute the filtrate 4 times with D.I. water

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Pain relief medications often contain a combination of ingredients that can be challenging to separate. The Acclaim Mixed-Mode WAX-1 column resolves all the active pharmaceutical ingredients (APIs) in this product.