



## Analysis of Formaldehyde

## Simple and Sensitive Method for Analyzing Free Formaldehyde

Formaldehyde is used for disinfections of industrially manufactured products. However, it is detrimental to health and its potential oncogenicity led to the current utilization of a formaldehyde donor for long-term preservation. Such donors are in hydrolytic equilibrium with formaldehyde producing free formaldehyde on exposure to moisture.

This method is used to quantify the free formaldehyde without upsetting the existing equilibrium. Potential interferences are either separated from formaldehyde or they don't react with the post-column reagent. The lutidine derivative is highly fluorescent resulting in ppm detection levels.

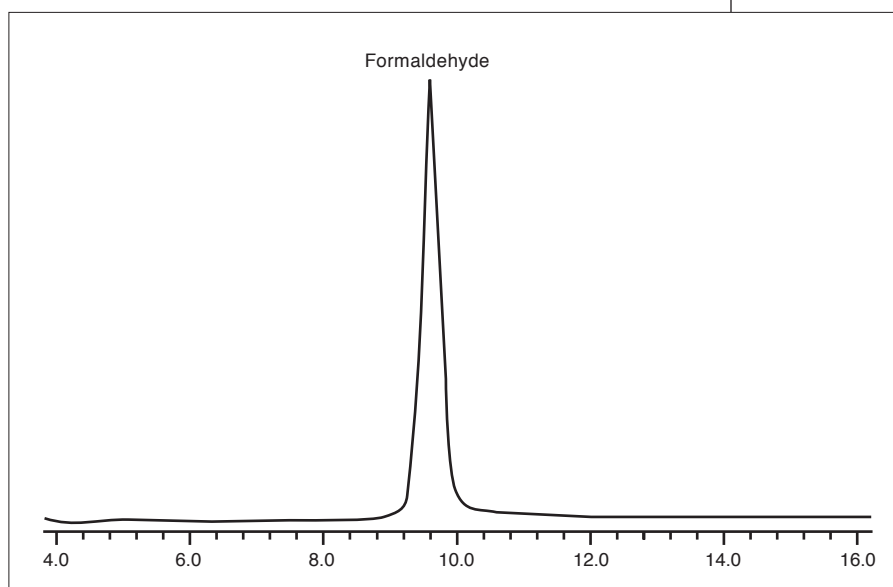
### METHOD

#### Analytical Conditions

COLUMN:	Diol, 5 $\mu$ m, 4.6 x 250mm
TEMPERATURE:	40° C
FLOW RATE:	0.5mL/min
MOBIL PHASE:	Acetonitrile: Water (85:15) isocratic

#### Post-column Conditions

POST-COLUMN SYSTEM:	Pinnacle PCX or Vector PCX
REACTOR VOLUME:	0.5mL
TEMPERATURE:	100° C
REAGENT:	0.81 M Ammonimn acetate 0.12 M Galcial acetic acid (pH=5) 0.05 M 2, 4-Pentanedione with water
FLOW RATE:	0.4mL/min
DETECTION:	Fluorometer $\lambda_{ex}$ : 412 nm $\lambda_{em}$ : 510 nm



Chromatogram of spiked (0.05%) shampoo