

Methylparaben Analyzer

YL Methylparaben Analyzer efficiently analyzes Methylparaben and Phenoxyethanol which are very commonly used as preservatives for cosmetics, drugs and other skincare products but they may cause toxicity at higher concentration to human body.

For they have an absorbance at UV/Vis wavelength range, these are usually analyzed by HPLC after extracted by organic solvents such as Methanol or DMF.

Our dedicated analyzer for Methylparaben/Phenoxyethanol supplies a photo diode array detector to provide accurate results separating all other impurities in the sample.

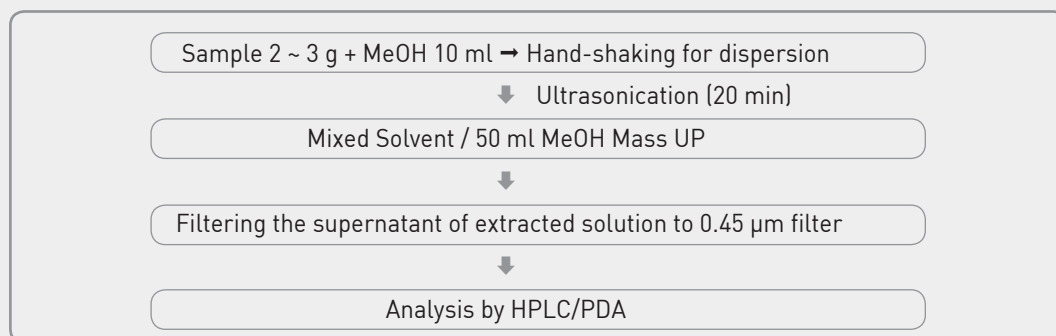
Because UV/Vis detector recognizes the wrong compounds as standard samples if the RT is same, PDA detector is recommended for an accurate qualitative analysis to check the exact spectrum.

If RT is same but spectrum is not, it means that this could be a different compound. Specially, Parabens are usually analyzed at the low concentration and it appears occasionally even though it's not added. These can be residuals from some kind of extractions, the spectrum that can see whether there Parabens are or not is essentially needed.

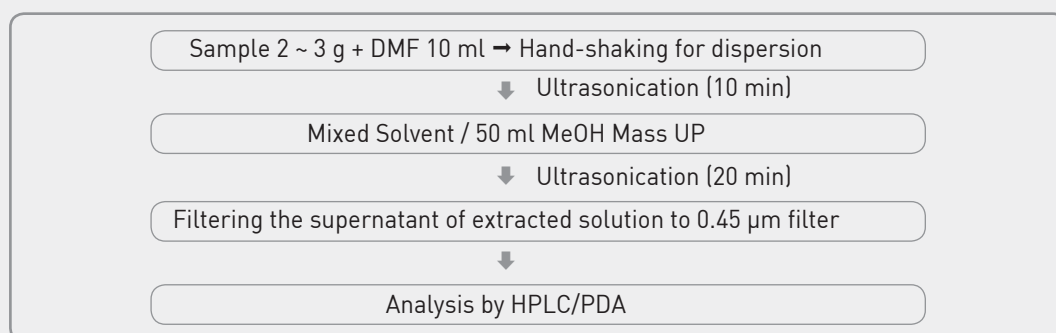
• Useful Information

• Sample & standard preparation

* Toners & Lotions



* Creams & Sunscreens



- **Recommended Column** : Sunfire C18 (4.6 mm, 250 mm, 5 μm)

• Application

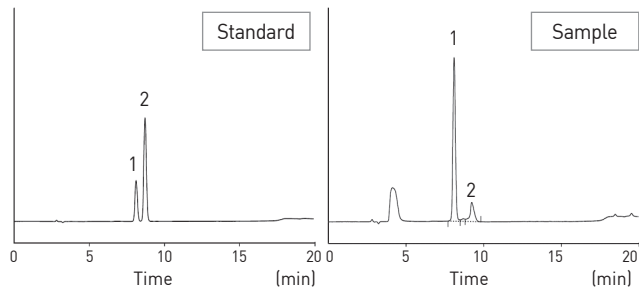
- Raw material standards and methods set-up of cosmetics

■ Comparison of retention time for compounds

- Mobile phase (Gradient)
A : Acetic acid 0.1 % (Ultra-pure Water)
B : Methanol

Time (min)	Flow rate (ml/min)	Mobile Phase A	Mobile Phase B
0	1	55	45
5	1	50	50
8	1	40	60
12	1	30	70
19	1	0	100
22	1	0	100
23	1	55	45

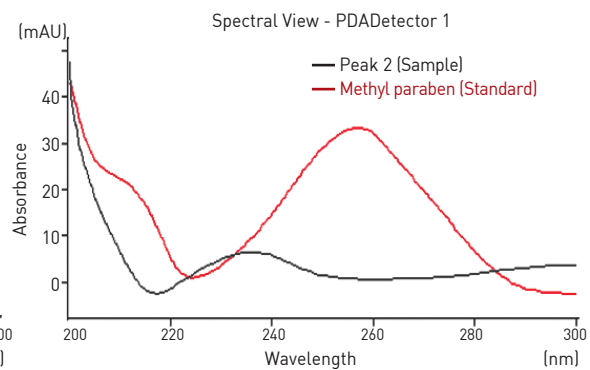
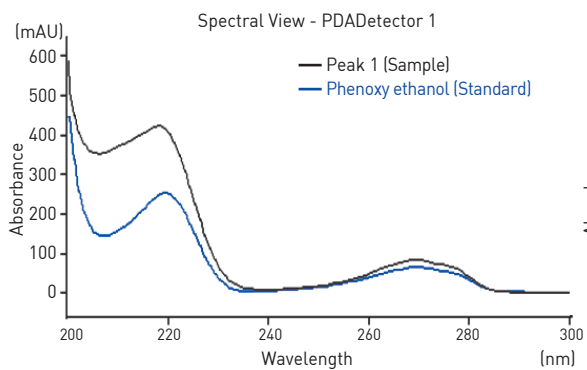
- Injector : 20 μ l sample loop
- Detector : PDA 257 nm
- Column : Sunfire C18 (4.6 mm, 250 mm, 5 μ m)
- Column oven temp. : 35 $^{\circ}$ C



It can be recognized as below if the Calibration standard is set to to retention time.

- 1 - Phenoxy ethanol
- 2 - Methylparaben

■ Comparison of PDA spectrum depending on compounds



- Spectrum result
1. Peak 1 = Phenoxy ethanol
 2. Even Retention Time is same with Standard, the spectrum of Peak 2 is different from Methyl paraben.

■ 5 Kinds of Paraben

- Column : SP C18 MGII (4.6 mm, 250 mm, 5 μ m)
- Detector : PDA 257 nm
- Flow : 1.0 ml/min
- Injection volume : 20 μ l
- Oven temp : 35 $^{\circ}$ C

Time (min)	Water (0.1 %Acetic acid)	ACN
init	55	45
5	50	50
10	45	55
15	40	60
20	40	60
23	35	65
28	35	65
30	0	100
36	0	100
37	55	45

