

September 25, 2018

To Valued customers

YMC CO., LTD.  
Quality Assurance Department

**Notification of change in guard column appearance**

Thank you very much for your continued business with us.

This notification is to inform you the change of the appearance of our guard column. We have checked and confirmed that this change does not influence on quality of the column. The details are described below.

We assure you that there is no change in product quality and performance. We appreciate your understanding and continued support.



1. Product to be changed

Guard column of the following size ( inner diameter X length (mm) )

A) 8.0 X 30 mm ( Product code XXXXXXXX-0308WTG )

B) 10.0 X 30 mm ( Product code XXXXXXXX-0310WTG )

2. Change details

	Current	New
Appearance	 <p>Two stainless steel guard columns, labeled A and B, are shown against a green grid background. Column A is shorter than column B.</p>	 <p>Two stainless steel guard columns, labeled A and B, are shown against a green grid background. Column A is shorter than column B. The appearance is identical to the current product.</p>

No change will be made on any other parts including material.

3. Reason for the change

The current product will be discontinued.

4. Date of change

From the products manufactured in October 2018

## 5. Performance comparison

The following table shows the comparison of the test results connecting current and new guard columns to the same Main column for separation.

### [Test conditions]

**Guard column** : YMC-Pack ODS-A (5  $\mu$ m, 12 nm), 30 X 10.0 mmI.D., AA12S05-0310WTG

**Main column** : YMC-Pack ODS-A (5  $\mu$ m, 12 nm), 250 X 10.0 mmI.D., AA12S05-2510WT

**Eluent** : Acetonitrile/Water (60/40)

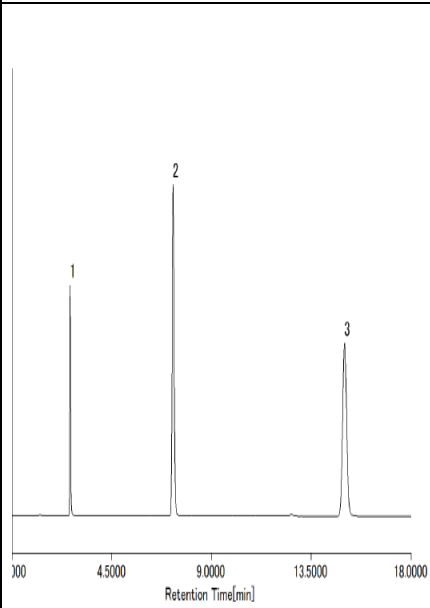
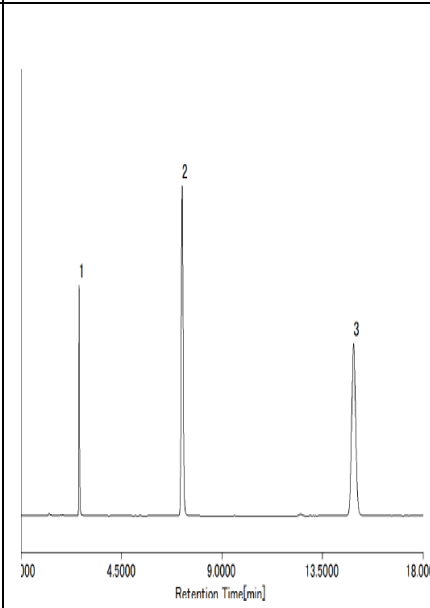
**Flow rate** : 4.70 mL/min

**Detection** : UV at 254 nm

**Sample** : 1. Uracil

2. Methyl benzoate

3. Naphthalene

	Current	New
Chromatogram		
k'(3)	4.75	4.75
N (3)	32468	32824
Tf (3)	1.07	1.04
P (MPa)	12.1	12.1

k' : Capacity factor

N : Theoretical plate number

Tf : Tailing factor

P : Column pressure