

**NEW**

# Smart Pre-Column (SMC)

In capillary GC analysis, when column injection volumes are more than tens of ng using micro-syringes or thermal decomposition methods are used, abnormal shapes are often observed at the rise of peaks in mid/high boiling point regions with carbon atom numbers of 15 to 40. This also occurs not only when using a pyrolysis device but also with only GC, and has been a mysterious phenomenon for

over 40 years since the invention of the capillary column.

By connecting this Smart Pre-Column (**SMC**) in front of the separation column, the problem of abnormal peaks is resolved, while at the same time improving the accuracy of quantitative analysis and greatly reducing contamination of the separation column.

## Features

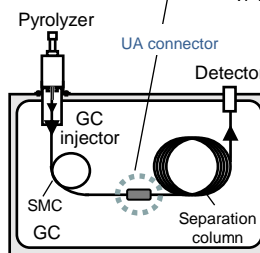
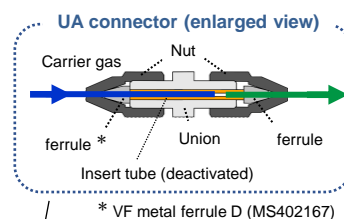
- 1. Elimination of abnormal peaks**
- 2. Improved reproducibility and quantitative analysis accuracy**
- 3. Extending the life of separation columns**  
(Trapping effect of active gases such as HCl and high-boiling-point compounds of C40 or higher)

## Specifications

- Smart Pre-Column : Deactivated stainless steel
- Length (i.d.) : 2.0 m (0.25 mm)
- Max use temperature : 400 °C
- Compatible column : o.d. 0.47mm metal capillary column

	Product name	Product number	Contents	Qty.
Set	Smart Pre-Column set	UASMC-K01	Smart pre-column (Ferrule* on one end)	2 ea.
			UA connector	1 ea.
			Wrench(6/8 mm)	2 ea.
			Filler (α-alumina)	1 g
Consumables	Smart Pre-Column	UASMC-M20	Ferrule* on one end	2 ea.
	UA Connector	UAGU-K02	Includes 2 ferrules	1 ea.
	VF Metal Ferrule D	MS402167	Ferrule	20 ea.

\* VF metal ferrule D (MS402167), for metal capillaries (i.d. 0.25 mm)

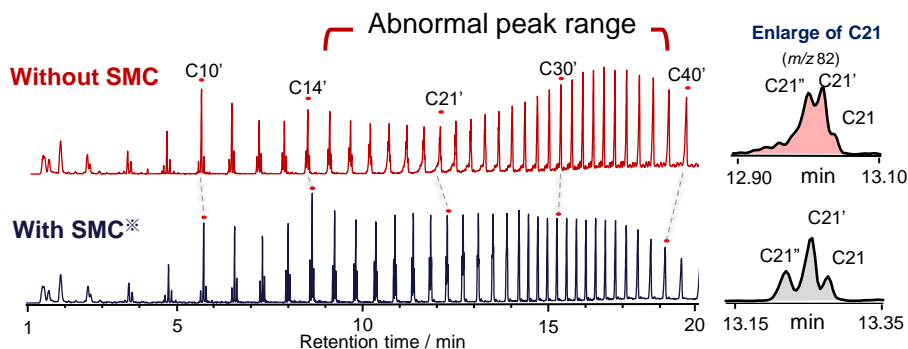


### 【Connection method】

Connect one end of the SMC to the GC inlet and the other end to the UA connector. Next, connect the separation column currently in use to the UA connector with the included ferrule.

## Application Examples

**Polyethylene Pyrogram (TICC):** Pyrolysis temperature 600 °C, Sample amount 0.3 mg, Split 1/50



※ Filler insert tube

Reproducibility of C21' peak area without and with applying SMC\*

SMC	RSD (%)
Without	7.57
With	0.68

\* Reproducibility of peak area using extracted ion chromatogram (m/z 82) (n=4)