Contamination Resistance of Ultra ALLOY® Metal Capillary Columns

The inner wall of Ultra ALLOY® metal capillary columns have high degree of roughness even after deactivation treatments, and its surface area is over 30 times greater than that of FS columns. This large surface area helps trap high boiling components, that may be contained in samples, at the front of GC column to prevent contamination of the entire column.

Dr. I. Matsumoto (MILS Co., Ltd.) has done excellent work in the application of capillary GC/MS to analyze over 3,000 metabolite specimens from urine and blood for early detection of various congenital disorders. Dr. Matsumoto uses our Ultra ALLOY columns which can survive continuous analysis of over 1,800 specimens; this is compared to FS columns which can only survive up to 500 specimens in continuous operation. Figure below shows an analysis example of urine metabolites using Ultra ALLOY⁺-5 column.

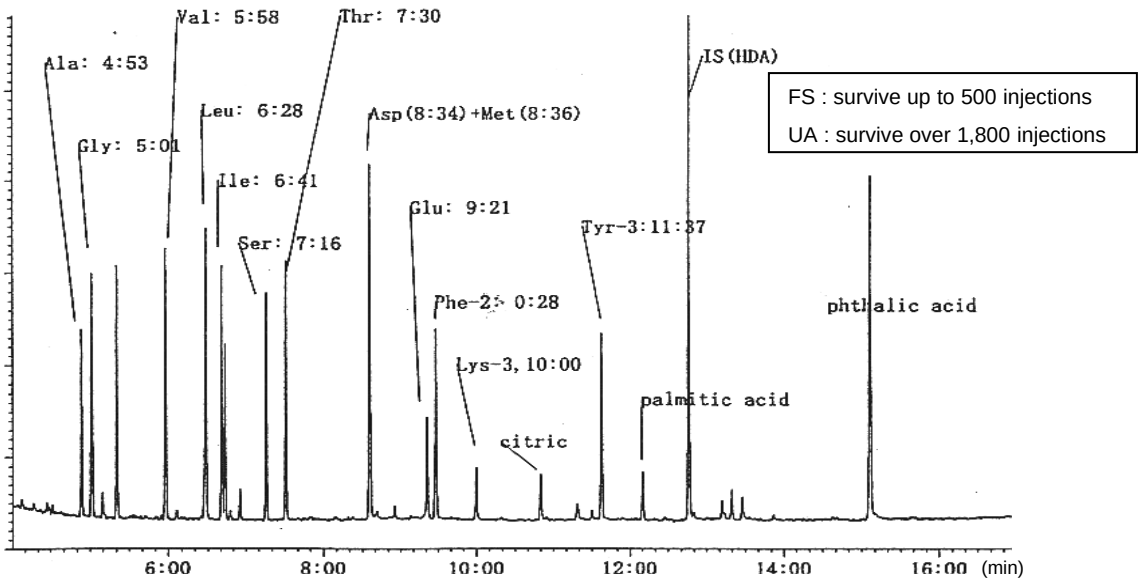

Fig. 1 Analysis of TMS Treated Urine Metabolites Using a Ultra ALLOY Column

Ultra ALLOY⁺-5(5% diphenyl polysiloxane) 30 m (0.25 mm i.d.) 0.25 µm
Oven : 60~350ºC (at 17 ºC/min), Splitless inj., Detector : MS

Keywords : Contamination Resistance, Metabolite Analysis, Comparison with FS Columns

Products used : Multi-functional pyrolyzer, UA-5

Applications : General Analysis

Related technical notes :

Please forward your inquiries via our web page or send us a fax message.

R&D and manufactured by :
Frontier Laboratories Ltd.
Phone: (81)24-935-5100 Fax: (81)24-935-5102
http://www.frontier-lab.com/