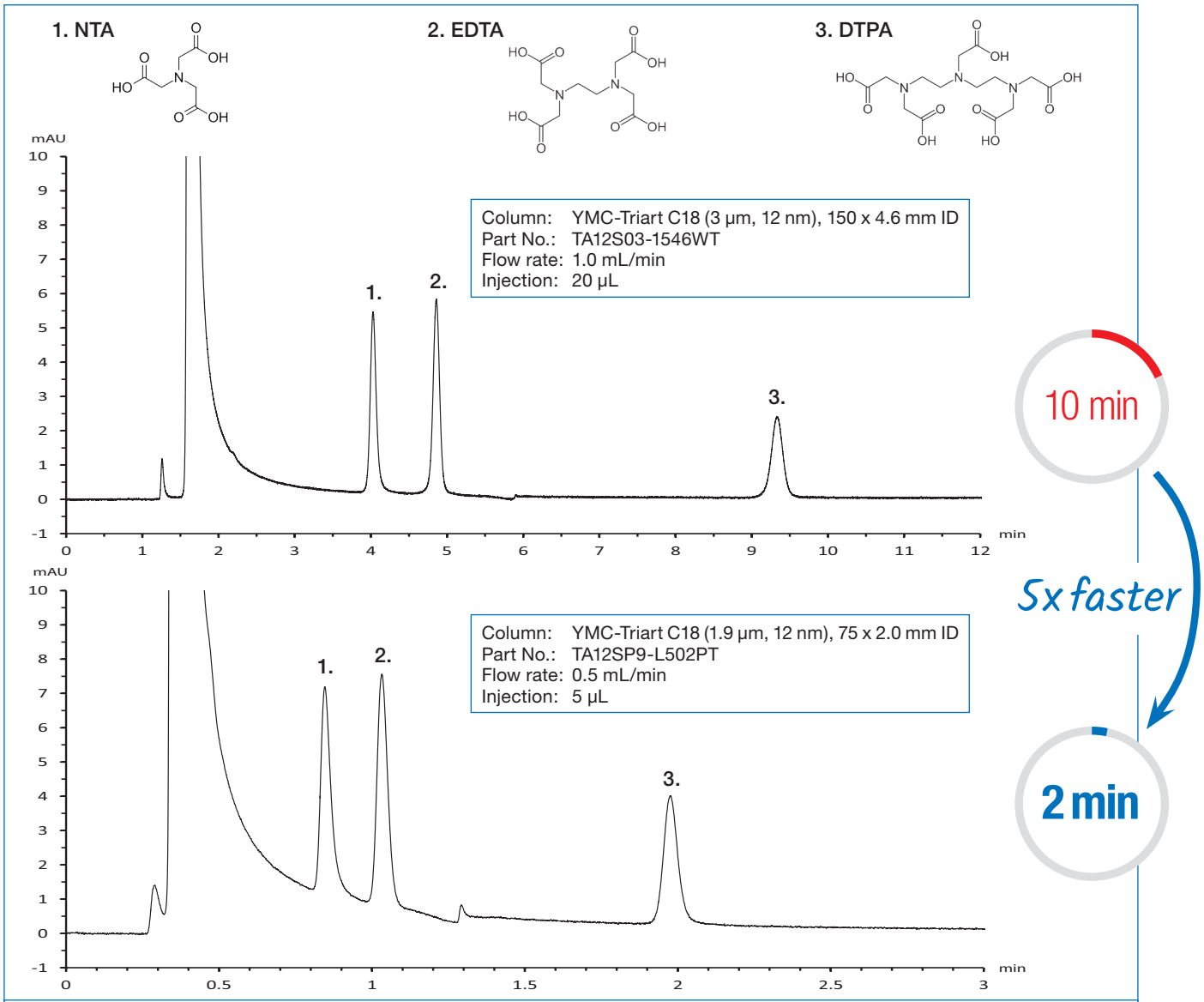
APPLICATION NOTE

Separation of Complexing Agents NTA, EDTA and DTPA According to German Standard Method DIN 38413-8[1)]

Due to their ability to build stable complexes with metal ions, nitrilotriacetic acid (NTA), ethylenedinitrilotetraacetic acid (ethylenediaminetetraacetic acid, EDTA) and diethylenetrinitrilopentaacetic acid (DTPA) are widely used in the textile, dyestuffs, cosmetic and food industries, as well as the pulp and paper industry. EDTA and DTPA in particular are found in wastewater and they degrade slowly and ultimately can also be found in surface water.

NTA, EDTA and DTPA can be efficiently separated as their Fe(III) complexes using YMC-Triart C18 in ion pair chromatography mode. Furthermore, downscaling to UHPLC is possible which results in five times faster analyses.



Eluent:	0.6 mmol/L nitric acid, 7.4 mmol/L tetrabutylammonium hydrogen sulfate, 2.6 mmol/L tetrabutylammonium hydroxide
Temperature:	25 °C
Detection:	UV at 260 nm
Sample Concentration:	1 mg/L

1) DIN 38413-8: German Standard methods for the examination of water, waste water and Sludge – Single components (group P) – Part 8: Determination of nitrilotriacetic acid (NTA), ethylenedinitrilotetraacetic acid (EDTA) and diethylenetrinitrilopentaacetic acid (DTPA) by liquid chromatography (P 8)
Deutsche Einheitsverfahren zur Wasser-, Abwasser- und Schlammuntersuchung; Einzelkomponenten (Gruppe P); Teil 8: Bestimmung der gelösten Komplexbildner Nitrilotriessigsäure (NTA), Ethylendinitrilotetraessigsäure (EDTA) und Diethylentrinitrilopentaessigsäure (DTPA) mit der Flüssigchromatographie (LC) (P 8)

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