

SUMICHIRAL TECHNICAL NEWS

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Inversion of the elution orders !! the special merit of SUMICHIRAL OA

SUMICHIRAL OA can give the inverse elution orders of optical isomers by changing a chiral component of the stationary phases into its enantiomer. This is of great advantage for accurate and trace determination of the optical purity and efficient preparation of the enantiomer. The kind of chiral stationary phases can be distinguished according to their brand names. When one capital letter adheres after the figures in the name of SUMICHIRAL OA, it refers to "inverse type". The table of the brand names of SUMICHIRAL OA is shown below.

Standard type		Inverse type	
SUMICHIRAL	Chiral component	SUMICHIRAL	Chiral component
OA-2000	(R)-phenylglycine	OA-2000S	(S)-phenylglycine
OA-2000-I	(R)-phenylglycine	OA-2000S-I	(S)-phenylglycine
OA-2500	(R)-1-naphthylglycine	OA-2500S	(S)-1-naphthylglycine
OA-2500-I	(R)-1-naphthylglycine	OA-2500S-I	(S)-1-naphthylglycine
OA-3100	(S)-valine	OA-3100R	(R)-valine
OA-3200	(S)-tert-leucine	OA-3200R	(R)-tert-leucine
OA-3300	(R)-phenylglycine	OA-3300S	(S)-phenylglycine
OA-4000	(S)-valine (S)-1-(-naphthyl)ethylamine	OA-4000R	(R)-valine (R)-1-(-naphthyl)ethylamine
OA-4100	(S)-valine (R)-1-(-naphthyl)ethylamine	OA-4100R	(R)-valine (S)-1-(-naphthyl)ethylamine
OA-4400	(S)-proline (S)-1-(-naphthyl)ethylamine	OA-4400R	(R)-proline (R)-1-(-naphthyl)ethylamine
OA-4500	(S)-proline (R)-1-(-naphthyl)ethylamine	OA-4500R	(R)-proline (S)-1-(-naphthyl)ethylamine
OA-4600	(S)-tert-leucine (S)-1-(-naphthyl)ethylamine	OA-4600R	(R)-tert-leucine (R)-1-(-naphthyl)ethylamine
OA-4700	(S)-tert-leucine (R)-1-(-naphthyl)ethylamine	OA-4700R	(R)-tert-leucine (S)-1-(-naphthyl)ethylamine
OA-4800	(S)-indoline-2-carboxylic acid (S)-1-(-naphthyl)ethylamine	*	
OA-4900	(S)-indoline-2-carboxylic acid (R)-1-(-naphthyl)ethylamine	*	
OA-5000	(D)-penicillamine	OA-5000L	(L)-penicillamine
OA-5500	(R)-2-amino-1,1-bis(2-butoxy-5-tert-butylphenyl)-3-phenyl-1-propanol	*	
OA-6000	(L)-tartaric acid (R)-1-(-naphthyl)ethylamine	OA-6000R	(D)-tartaric acid (S)-1-(-naphthyl)ethylamine
OA-6100	(L)-tartaric acid, (S)-valine (S)-1-(-naphthyl)ethylamine	OA-6100R	(D)-tartaric acid, (R)-valine (R)-1-(-naphthyl)ethylamine

* The inverse types of SUMICHIRAL OA-4800,4900 and 5500 are not available.

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Following figures show typical chromatograms using corresponding “standard” and “inverse” SUMICHIRAL OA respectively after analysis of the same sample. These two chiral stationary phases give the same retention times and the same separation factors, but only the elution orders are different.

