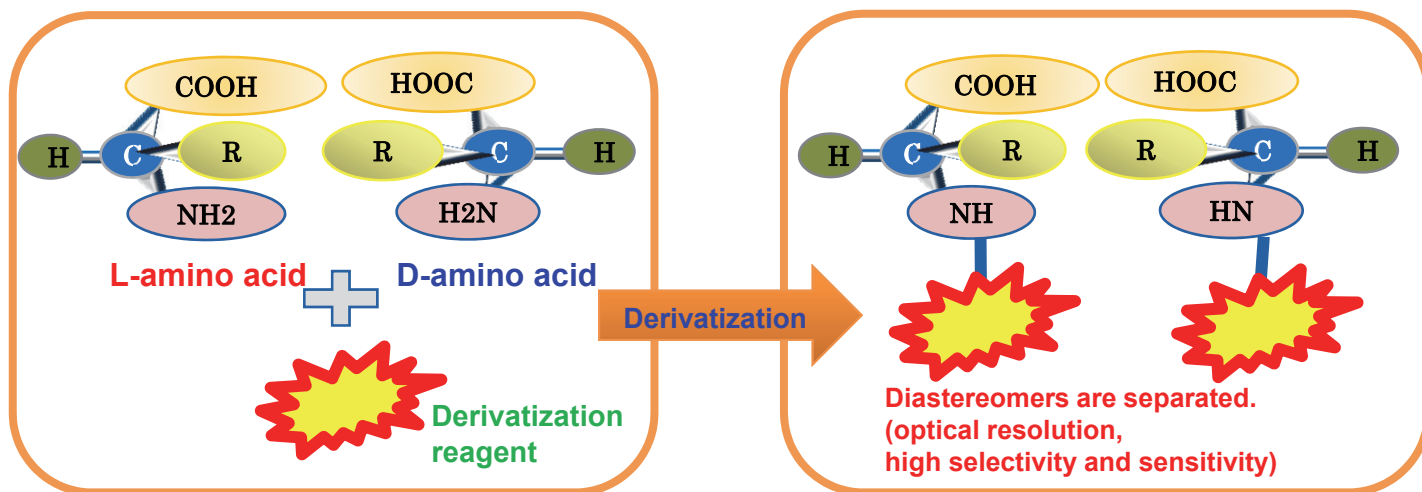


LC/MS/MS methods for optical resolution and quantification of D- and L-amino acids

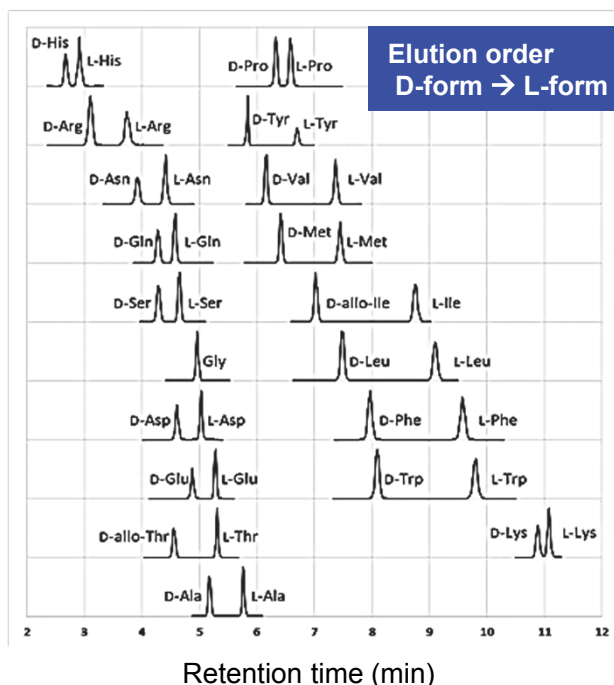
D-amino acids research has been progressing rapidly in the fields of pharmaceutical, medical, and other life science as well as food, drink, health, and cosmetics.
TRC has launched new contract service using LC/MS/MS. After pre-column derivatization of amino acids, D- and L- amino acids are resolved optically and quantified simultaneously with ultra-high sensitivity.

Derivatization of DL-amino acids



D- and L-amino acids analysis & potential fields

DL-amino acid standard



Pharmaceutical, medical science, and life innovation

For diseases and biomarkers

- Acute kidney failure: Decrease of D-Serine in urine
- Alzheimer's disease: Decrease of D-Ala and D-Serine in CSF
- ALS: Accumulation of D-Serine in spinal cord
- Male infertility: D-Serine is possibly related

Food and drink

Food benefits

- Supplement nutrition necessary for healthy life
- Increase umami

Health and cosmetics

Health benefits

- Protect against diseases
- D-Asparagine for healthy skin

Advantages

- ✦ No isomerization during derivatization
- ✦ Derivatized amino acids are stable up to 48 h.
- ✦ Complete separation of D- and L-amino acids from proteinogenic amino acids
- ✦ Analysis time, 15 min; sensitivity, 5 nM

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