

Approfondimento

Gli aminoacidi

Formule e nomi dei 20 aminoacidi presenti negli organismi viventi. I nomi evidenziati si riferiscono agli 8 aminoacidi essenziali, cioè agli aminoacidi che l'organismo umano non riesce a sintetizzare; essi pertanto devono essere assunti attraverso le proteine presenti negli alimenti.

Formula	Nome	Formula	Nome
$\begin{array}{c} \text{O} \\ \parallel \\ \text{H} - \text{CH} - \text{C} \\ \quad \backslash \\ \text{NH}_2 \quad \text{OH} \end{array}$	glicina (Gly)	$\begin{array}{c} \text{O} \\ \parallel \\ \text{HO} - \text{CH}_2 - \text{CH} - \text{C} \\ \quad \backslash \\ \text{NH}_2 \quad \text{OH} \end{array}$	serina (Ser)
$\begin{array}{c} \text{O} \\ \parallel \\ \text{CH}_3 - \text{CH} - \text{C} \\ \quad \backslash \\ \text{NH}_2 \quad \text{OH} \end{array}$	alanina (Ala)	$\begin{array}{c} \text{O} \\ \parallel \\ \text{CH}_3 - \text{CH} - \text{CH} - \text{C} \\ \quad \quad \backslash \\ \text{OH} \quad \text{NH}_2 \quad \text{OH} \end{array}$	treonina (Thr)
$\begin{array}{c} \text{O} \\ \parallel \\ \text{CH}_3 - \text{CH} - \text{CH} - \text{C} \\ \quad \quad \backslash \\ \text{CH}_3 \quad \text{NH}_2 \quad \text{OH} \end{array}$	valina (Val)	$\begin{array}{c} \text{O} \\ \parallel \\ \text{HS} - \text{CH}_2 - \text{CH} - \text{C} \\ \quad \backslash \\ \text{NH}_2 \quad \text{OH} \end{array}$	cisteina (Cys)
$\begin{array}{c} \text{O} \\ \parallel \\ \text{CH}_3 - \text{CH} - \text{CH}_2 - \text{CH} - \text{C} \\ \quad \quad \backslash \\ \text{CH}_3 \quad \text{NH}_2 \quad \text{OH} \end{array}$	leucina (Leu)	$\begin{array}{c} \text{O} \\ \parallel \\ \text{CH}_3 - \text{S} - \text{CH}_2 - \text{CH}_2 - \text{CH} - \text{C} \\ \quad \backslash \\ \text{NH}_2 \quad \text{OH} \end{array}$	metionina (Met)
$\begin{array}{c} \text{O} \\ \parallel \\ \text{CH}_3 - \text{CH}_2 - \text{CH} - \text{CH} - \text{C} \\ \quad \quad \backslash \\ \text{CH}_3 \quad \text{NH}_2 \quad \text{OH} \end{array}$	isoleucina (Ile)	$\begin{array}{c} \text{O} \\ \parallel \\ \text{CH}_2 - \text{CH} - \text{C} \\ \quad \quad \backslash \\ \text{CH}_2 \quad \text{NH} \quad \text{OH} \\ \\ \text{CH}_2 \end{array}$	prolina (Pro)
$\begin{array}{c} \text{O} \\ \parallel \\ \text{HO} - \text{C} - \text{CH}_2 - \text{CH} - \text{C} \\ \quad \quad \backslash \\ \text{O} \quad \text{NH}_2 \quad \text{OH} \end{array}$	acido aspartico (Asp)	$\begin{array}{c} \text{O} \\ \parallel \\ \text{H}_2\text{N} - \text{C} - \text{CH}_2 - \text{CH} - \text{C} \\ \quad \quad \backslash \\ \text{O} \quad \text{NH}_2 \quad \text{OH} \end{array}$	asparagina (Asn)
$\begin{array}{c} \text{O} \\ \parallel \\ \text{HO} - \text{C} - \text{CH}_2 - \text{CH}_2 - \text{CH} - \text{C} \\ \quad \quad \backslash \\ \text{O} \quad \text{NH}_2 \quad \text{OH} \end{array}$	acido glutammico (Glu)	$\begin{array}{c} \text{O} \\ \parallel \\ \text{H}_2\text{N} - \text{C} - \text{CH}_2 - \text{CH}_2 - \text{CH} - \text{C} \\ \quad \quad \backslash \\ \text{O} \quad \text{NH}_2 \quad \text{OH} \end{array}$	glutammina (Glu)
$\begin{array}{c} \text{O} \\ \parallel \\ \text{C}_6\text{H}_5 - \text{CH}_2 - \text{CH} - \text{C} \\ \quad \backslash \\ \text{NH}_2 \quad \text{OH} \end{array}$	fenilalanina (Phe)	$\begin{array}{c} \text{O} \\ \parallel \\ \text{H}_2\text{N} - \text{CH}_2 - \text{CH}_2 - \text{CH}_2 - \text{CH}_2 - \text{CH} - \text{C} \\ \quad \backslash \\ \text{NH}_2 \quad \text{OH} \end{array}$	lisina (Lys)
$\begin{array}{c} \text{O} \\ \parallel \\ \text{HO} - \text{C}_6\text{H}_4 - \text{CH}_2 - \text{CH} - \text{C} \\ \quad \backslash \\ \text{NH}_2 \quad \text{OH} \end{array}$	tirosina (Tyr)	$\begin{array}{c} \text{O} \\ \parallel \\ \text{HN} = \text{C} - \text{NH} - \text{CH}_2 - \text{CH}_2 - \text{CH}_2 - \text{CH} - \text{C} \\ \quad \backslash \\ \text{NH}_2 \quad \text{NH}_2 \quad \text{OH} \end{array}$	arginina (Arg)
$\begin{array}{c} \text{O} \\ \parallel \\ \text{C}_8\text{H}_6\text{N}_2 - \text{CH}_2 - \text{CH} - \text{C} \\ \quad \backslash \\ \text{NH}_2 \quad \text{OH} \end{array}$	triptofano (Trp)	$\begin{array}{c} \text{O} \\ \parallel \\ \text{C}_4\text{H}_3\text{N}_2 - \text{CH}_2 - \text{CH} - \text{C} \\ \quad \backslash \\ \text{NH}_2 \quad \text{OH} \end{array}$	istidina (His)