Amino-acizi naturali

Amino-acizii sunt combinatii organice care contin in molecula una sau mai multe grupe amino si una sau mai multe grupe carboxil. Dupa structura, amino-acizii se impart in doua mari categorii:

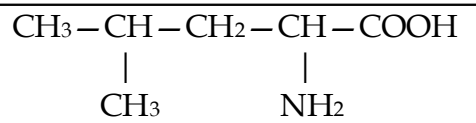
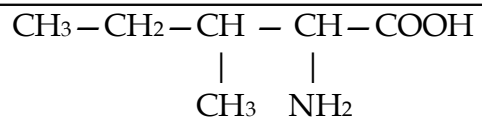
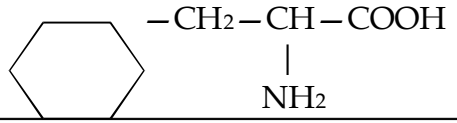
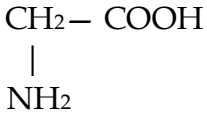
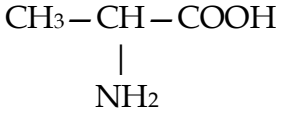
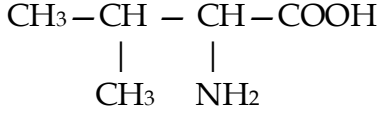
1. Alifatici: unde grupele functionale sunt legate de o catena alifatica, chiar daca in molecula exista un nucleu aromatic.
2. Aromatici: unde grupele functionale sunt legate de un ciclu aromatic.

Dupa asezarea relativa a grupelor functionale se deosebesc α-amino-acizi, β-amino-acizi, γ-amino-acizi, etc. Dintre amino-acizii alifatici, cei mai importanti sunt α-amino-acizi, adica acei amino-acizi care contin grupele functionale legate de acelasi atom de carbon. Se deosebesc mai multe categorii mari de α-amino-acizi alifatici:

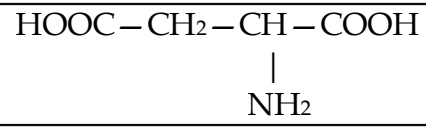
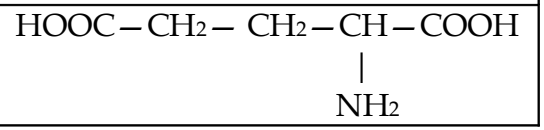
1. monocarboxilici
2. dicarboxilici
3. hidroxi-amino-acizi
4. tioamino-acizi
5. diamino-acizi
6. amino-acizi heterociclici

Denumirea	**Prescurtarea**	**Formula**

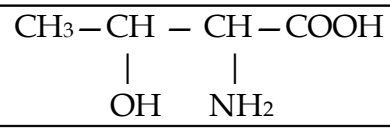
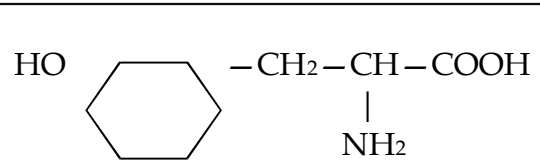
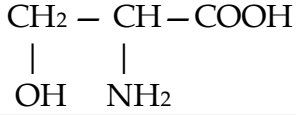
Amino-acizi monocarboxilici

Leucina (acidul α-aminoizocapronic)	Leu	
Izoleucina (acidul α-amino-β-metilvalerianic)	Ileu	
Fenilalanina (acidul α-amino-β-fenil-propionic)	Fe	
Glicocolul(glicina) (acidul aminoacetic)	Gli	
Alanina (acidul α-aminopropionic)	Ala	
Valina (acidul α-aminoizovalerianic)	Val	

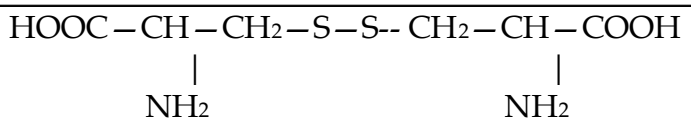
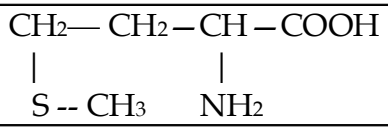
Amino-acizi dicarboxilici

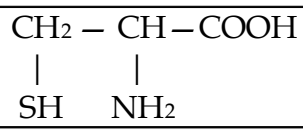
Acidul asparagic (acidul aminosuccinic)	Asp	
Acidul glutamic (acidul α-aminoglutaric)	Glu	

Hidroxi-amino-acizi

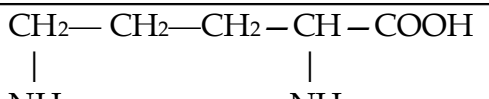
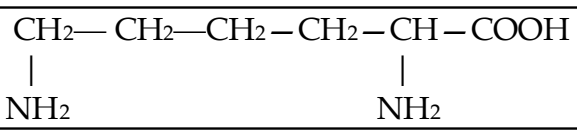
Treonina (acidul α-amino-β-hidroxibutiric)	Tr	
Tirosina (acidul α-amino-β-hidroxifenil-propionic)	Ti	
Serina (acidul α-amino-β-hidroxipropionic)	Ser	

Tio-amino-acizi

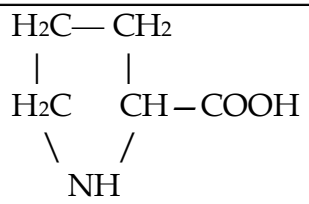
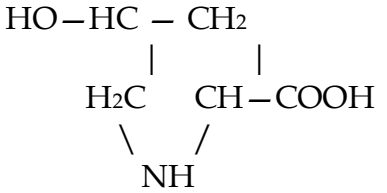
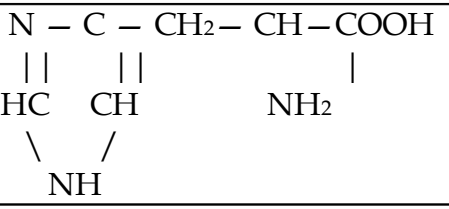
Cistina (acidul di[α-amino-β-tiopropionic])	Ci—S Ci—S	
Metionina (acidul α-amino-γ-metiltiobutiric)	Met	

Cisteina (acidul α-amino-β-tiopropionic)	Cis	

Diamino-acizi

Ornitina (acidul α, δ-diaminovalerianic)	Or	
Lisina (acidul α, ε-diaminocapronic)	Lis	

Amino-acizi heterociclici

Prolina (acidul pirolidin-α-carboxilic)	Pro	
Hidroxiprolina (acidul β-hidroxipirolidin-α-carboxilic)	Hipro	
Histidina (acidul α-amino-β-imidazolil-(4)-propionic) (imidazolil-(4)-alanina)	His	

Triptofanul (acidul α-amino-β-indolil-(3)-propionic) (indolil-(3)-alanina)	Tri