

AMINO-ACID AND MINERAL COMPOSITION OF THE SEEDS OF *Euryale ferox*

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The seeds of *Euryale ferox* Salisb. are widely used in traditional oriental medicine to cure a variety of diseases, including kidney problems, chronic diarrhea, excessive leucorrhea, and hypofunction of the spleen [1]. Samples of raw material for the research was collected from Guangdong, China.

The qualitative and quantitative amino acid composition of the seeds of *E. ferox* were determined as in [2]. Table 1 lists the results. The macro- and microelement compositions of the studied samples were determined as in [3]. The results are listed in Table 2.

Table 1 shows that the content of essential amino acids was 47.05% of the total amount. Table 2 gives the content of 14 elements of *E. ferox*. It contains sufficient quantities of essential microelements (Mg, Fe, Zn, Mn, Cu, Se, and I). Toxic and potentially toxic elements (Pb and Cd) were also present, the concentrations of which were less than the allowed values in plant preparations [4].

TABLE 1. Amino-Acid Composition of Seeds of *E. ferox*

Amino acid	Amount of amino acid per 100 g substance, mg	Amino acid	Amount of amino acid per 100 g substance, mg
Asp	1282.36	Ile*	201.37
Glu	1581.57	Thr*	496.25
Val*	298.65	Tyr	230.06
Ala	258.44	Arg*	987.21
Gly	273.12	Trp*	32.48
Lys*	238.97	Cys	29.95
His*	1175.08	Met*	157.15
Pro	254.72	Total amino acids	8751.96
Leu*	340.58	Total essential amino acids	4117.59
Ser	724.15	Essential amino acids per total amino acids, %	47.05
Phe*	189.85		

*Essential amino acids.

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TABLE 2. Mineral Composition of Seeds of *E. ferox*

Element	Content, mg/kg	Element	Content, mg/kg
P	142.26	Mn	15.42
Ca	116.53	Cu	6.18
K	377.35	Cd	2.07
Na	228.6	Ni	0.15
Mg	268.33	Pb	25.8
Fe	126.5	Se	0.17
Zn	23.36	I	8.96

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