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Full Papers

微量热法研究氰化物对鲤鱼肝线粒体代谢的影响

李会荣[1], 刘义[*, 1], , 戴捷[1], 覃彩芹[2]，张忠海[2]，屈松生[1]

[1]武汉大学化学与分子科学学院，武汉430072

[2]孝感学院化学系，孝感432100

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摘要 用微量热法研究了电子传递链抑制剂对线粒体代谢的影响的热功率曲线，结果表明，随着氰化物浓度的增加，最大热功率呈线性降低，但产热量基本保持不变；水生动物鲤鱼的线粒体对氰化物具有一定的耐受能力。不同的浓度下，氰化物对线粒体作用机理进行了探讨。

关键词 微量热法,氰化物,线粒体,代谢

分类号

Investigation of the Inhibition of Cyanide on Metabolism of Fish Liver Mitochondria by Microcalorimetry

LI Hui-Rong[1], LIU Yi*[,1], DAI Jie[1], QIN Cai-Qin[2], ZHANG Zhong-Hai[2], QU Song-Sheng[1]

[1] *Department of Chemical Biology, College of Chemistry and Molecular Sciences, Wuhan University, Wuhan, Hubei 430072, China*

[2] *Department of Chemistry, Xiaogan University, Xiaogan, Hubei 432100, China*

Abstract A microcalorimetric technique based on the metabolic heat-output was explored to evaluate the inhibition of cyanide on the mitochondrial metabolism of aquatic animal, *Cyprinus carpio*. The power-time curves could be divided into four parts: lag phase, active recovery phase, stationary phase, and decline phase, and the corresponding thermokinetic parameters were obtained. The maximum heat production rate P_{max} decreased in a linear manner with the increase of concentration of cyanide, however, such mitochondria of aquatic animal were still metabolized actively even under the action of high concentration of cyanide. All the observations suggested that the mitochondria of this aquatic animal should exhibit considerable ability of cyanide-resistant respiration.

Key words mitochondria microcalorimetry metabolism sodium cyanide

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通讯作者 刘义 prof.liuyi@263.net, liuyi@chem.whu.edu.cn