

实验研究

## 人芽囊原虫保存方法的初步研究

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摘要

目的 观察冻存剂、温度等因素对人芽囊原虫活力的影响, 探索理想的人芽囊原虫保存方法。方法 从患者阳性粪便中分离人芽囊原虫, 分装到2 ml无菌冻存管内, 分别加入10%二甲基亚砷(dimethylsulfoxide, DMSO)、40%丙三醇(GL)和15%乙二醇(EG)作冻存剂, 放置于不同的温度下保存, 用台盼蓝染色法和原虫培养法测定细胞的活力和增殖能力。结果 虫体在室温(18℃~20℃)下可存活3周, 在4℃~6℃存活不到1周。加入冻存剂后, 置-20℃和液氮(-196℃)下可存活3个月以上。用40% GL作冻存剂, 于液氮低温下冻存的虫体保存半年后复苏, 活力仍达41.7%, 培养72 h后多见分裂相细胞。结论 应用40% GL作为冻存剂, 在液氮中低温保存人芽囊原虫效果较佳。4℃不适于保存人芽囊原虫。

关键词

[人芽囊原虫](#) [保存](#) [温度](#)

分类号

## A Preliminary Study on Preservation Methods of *Blastocystis hominis*

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Abstract

Objective To observe the effect of different cryoprotective agents and temperature factors on the viability of *Blastocystis hominis* so as to explore the ideal method for preservation of *B. hominis*. Methods *B. hominis* agents were obtained from a patient's fecal specimen. Having washed by normal saline and divided into tubes, the samples were cryopreserved in -20℃ refrigerator or in -196℃ liquid nitrogen with 10% DMSO, 40% glycerol and 15% ethylene glycol respectively. The thawed *B. hominis* agents were then used for culture. By trypan blue staining and microscopy, the viability and proliferation of those resuscitative cells were investigated. Results *B. hominis* survived for 3 weeks at 18℃-20℃ while less than 1 week at 4℃-6℃. When stored in -20℃ refrigerator or liquid nitrogen with cryoprotective agents, they survived for more than 3 months. The cryopreservation with 40% glycerol at -196℃ for 6 months resulted in 41.7% viability of the revived cells. Cleavage cells were easily observed after culturing for 72 hours. Conclusion Preserving *B. hominis* in liquid nitrogen with 40% glycerol is an optimal cryopreservation protocol.

Key words [Blastocystis hominis](#) [Preservation](#) [Temperature](#)

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