The effect of additives on the production of secondary metabolites and antioxidant properties of Antrodia cinnamomea by grain solid-state culture. The cultures were under various conditions, and at a period of 30 or 45 days. Grains of Coix lacryma-jobi, wheat, and pearl barley were used as basic medium respectively. The highest yield of polysaccharide and triterpenes produced by A. cinnamomea cultured on Coix medium were 23.01 mg/ml and 10.63 %, respectively. At 45 day, the highest yield of polysaccharide derived from A. cinnamomea cultured on pearl barley and wheat medium were 60.80 and 31.48 mg/ml, respectively. And the highest yield of triterpenes derived from A. cinnamomea cultured on pearl barley and wheat medium were 10.11 and 0.05 %, respectively. Culturing at 30 ℃ for 60 days, the highest yield of polysaccharide and triterpenes obtained on wheat and pearl barley media of A. cinnamomea were 64.12 mg/ml and 17.59 %, respectively. For different additives on culturing A. cinnamomea, the highest polysaccharide yield was 68.66 mg/ml when 0.5 % (w/w) CaCl2 was added to pearl barley medium at 30 day of culture. And the highest triterpenes obtained was 16.65 %, which was produced at 60 day by A. cinnamomea when 0.5 % (w/w) chitosan was used as additive in pearl barley medium. When Chinese medicinal herbs were added to culture media, the highest polysaccharide yielded 70.90 mg/ml on wheat medium with 1 % (w/w) Magnolia officinalis at 15 day. And the highest triterpenes produced was 33.72 % on pearl barley medium supplemented with 1 % (w/w) Perilla frutescens at 30 day culture of A. cinnamomea. The highest scavenging ability on DPPH radical of methanolic vi extract (10 mg/ml) was 95.47 % obtained from culturing A. cinnamomea on Coix medium added with 0.5% (w/w) Ocimum basilicum at 15 day. The highest chelating capability on ferrous ions of methanolic extract (20 mg/ml) was 95.75% derived from adding 0.5 % (w/w) chitosan on wheat medium for culturing A. cinnamomea 60 days. And the highest reducing powers of methanolic extract (10 mg/ml) was 2.957 yielded from A. cinnamomea when culturing on pearl barley medium added with 0.5% (w/w) Piper betle at 60 day.

Keywords: Antrodia cinnamomea, grain solid-state culture, polysaccharide, triterpenoid, antioxidant property
力之測定

二、螯合亞鐵離子

三、還原力

四、總抗氧化力

力

五、清除超氧陰離子能力測

定

第四節 固態發酵培養

養

質

第二節 實驗材料

科

藥

成品

法

化

備

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析

錄

獻

圖目錄

實驗設計

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實驗方法

實驗結果

實驗討論

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實驗討論
的小麥培養基培養 其天發酵物甲醇萃取液濃度 10 mg/ml 的螯合亞鐵離子能力。圖 22、25℃下樟芝於添加不同中草藥的薏仁培養基培養 60 天其發酵物甲醇萃取液濃度 10 mg/ml 的還原力。圖 23、25℃下樟芝於添加不同中草藥的裸麥培養基培養 60 天其發酵物甲醇萃取液濃度 10 mg/ml 的還原力。圖 24、25℃下樟芝於添加不同中草藥的小麥培養基培養 60 天其發酵物甲醇萃取液濃度 10 mg/ml 的還原力。圖 25、25℃下樟芝於添加不同中草藥的薏仁培養基培養 60 天其發酵物甲醇萃取液濃度 10 mg/ml 的還原力。圖 26、25℃下樟芝於添加不同中草藥的薏仁培養基培養 60 天其發酵物甲醇萃取液濃度 10 mg/ml 的還原力。圖 27、25℃下樟芝於添加不同中草藥的小麥培養基培養 60 天其發酵物甲醇萃取液濃度 10 mg/ml 的還原力。表目录 表一、氧化對人體的可能的傷害。表二、不同溫度下薏仁培養樟芝多醣產量的變化。表三、不同溫度下薏仁培養樟芝多醣產量的變化。表四、不同溫度下薏仁培養樟芝多醣產量的變化。表五、不同溫度下薏仁培養樟芝多醣產量的變化。表六、不同溫度下薏仁培養樟芝多醣產量的變化。表七、不同溫度下薏仁培養樟芝多醣產量的變化。表八、不同溫度下薏仁培養樟芝多醣產量的變化。表九、不同溫度下薏仁培養樟芝多醣產量的變化。表十、不同溫度下薏仁培養樟芝多醣產量的變化。表十一、不同溫度下薏仁培養樟芝多醣產量的變化。表十二、不同溫度下薏仁培養樟芝多醣產量的變化。表十三、不同溫度下薏仁培養樟芝多醣產量的變化。表十四、不同溫度下薏仁培養樟芝多醣產量的變化。表十五、不同溫度下薏仁培養樟芝多醣產量的變化。表十六、不同溫度下薏仁培養樟芝多醣產量的變化。表十七、不同溫度下薏仁培養樟芝多醣產量的變化。表十八、不同溫度下薏仁培養樟芝多醣產量的變化。表十九、不同溫度下薏仁培養樟芝多醣產量的變化。表二十、不同溫度下薏仁培養樟芝多醣產量的變化。表二十一、不同溫度下薏仁培養樟芝多醣產量的變化。表二十二、不同溫度下薏仁培養樟芝多醣產量的變化。表二十三、不同溫度下薏仁培養樟芝多醣產量的變化。表二十四、不同溫度下薏仁培養樟芝多醣產量的變化。表二十五、不同溫度下薏仁培養樟芝多醣產量的變化。表二十六、不同溫度下薏仁培養樟芝多醣產量的變化。表二十七、不同溫度下薏仁培養樟芝多醣產量的變化。表二十八、不同溫度下薏仁培養樟芝多醣產量的變化。表二十九、不同溫度下薏仁培養樟芝多醣產量的變化。表三十、不同溫度下薏仁培養樟芝多醣產量的變化。表三十一、不同溫度下薏仁培養樟芝多醣產量的變化。表三十二、不同溫度下薏仁培養樟芝多醣產量的變化。表三十三、不同溫度下薏仁培養樟芝多醣產量的變化。表三十四、不同溫度下薏仁培養樟芝多醣產量的變化。表三十五、不同溫度下薏仁培養樟芝多醣產量的變化。表三十六、不同溫度下薏仁培養樟芝多醣產量的變化。表三十七、不同溫度下薏仁培養樟芝多醣產量的變化。表三十八、不同溫度下薏仁培養樟芝多醣產量的變化。表三十九、不同溫度下薏仁培養樟芝多醣產量的變化。表四十、不同溫度下薏仁培養樟芝多醣產量的變化。表四十一、不同溫度下薏仁培養樟芝多醣產量的變化。表四十二、不同溫度下薏仁培養樟芝多醣產量的變化。表四十三、不同溫度下薏仁培養樟芝多醣產量的變化。表四十四、不同溫度下薏仁培養樟芝多醣產量的變化。表四十五、不同溫度下薏仁培養樟芝多醣產量的變化。表四十六、不同溫度下薏仁培養樟芝多醣產量的變化。表四十七、不同溫度下薏仁培養樟芝多醣產量的變化。表四十八、不同溫度下薏仁培養樟芝多醣產量的變化。表四十九、不同溫度下薏仁培養樟芝多醣產量的變化。表五十、不同溫度下薏仁培養樟芝多醣產量的變化。
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