中国农学通报 2011, 27(第2期1月) 429-433 DOI: ISSN: 1000-6850 CN: 11-1984/S

食品—应用研究

北京地区夏季野生食用菌生物指标的测定

赵爽[1],刘宇[2],殷贝贝[2],王贺祥[2],王守现[2],许 峰[2],耿小丽[2],孟莉莉[2]

1. 北京市农林科学院植物保护与环境保护研究所

2.

摘要:

为了扩大对野生资源的评价和利用，2009年夏季在北京周边山区收集常见的四种野生菌黄伞、血红铆钉菇、短柄粘盖牛肝菌和马勃的子实体。利用二喹林甲酸检测法、苯酚-硫酸法以及改良后的酶活性检测法分别测定四种子实体中蛋白质和水溶性多糖的含量、蛋白酶、磷酸酶和漆酶的活性以及凝集素的活力单位，通过对上述四种野生资源测定指标进行评价，发掘出可用于深度加工的野生品种。研究发现，黄伞子实体中蛋白质和多糖含量相对较高，分别占子实体鲜重和干重的5.12%和2.39%，并且具有凝集素的活性；四种野生菌都具有磷酸酶活性，其中马勃的酶活力最高，为339.91 U/mg；短柄粘盖牛肝菌和马勃存在微弱的漆酶活性，酶活力分别为0.341 U/mg和0.438 U/mg；在四种野生菌中未检测到蛋白酶的活性。比较结果证明黄伞子实体中的蛋白质和多糖含量较高，马勃具有较高的磷酸酶活性，这些野生资源都可以作为深加工的优势材料，进行深度研究开发。

关键词: 蛋白含量；酶；多糖含量；凝集素

Determining Biological Index of Several Mushroom Collected in Beijing Mountainous Areas

Abstract:

In order to exploit application resources of wild mushroom, we collected four fruiting bodies of wild mushroom which are common in Peking mountainous areas, Pnoliota adiposa, Chroogomphis rutillus, Suillus brevipes and Lasiosphaera fenzlii. We detected the contents of protein and hydrophilic polysaccharide, proteinase, phosphatase, laccase and lectin in four types of fruiting bodies by bicinchoninic acid method, phenol-sulphuric acid method and modified enzyme detection. The aim of this study is to compare the resource value of the four wild mushrooms, and find the wild materials for further processing. The results showed that the contents of protein and hydrophilic polysaccharide of Pnoliota adipose, which were equal to 5.12% of fresh mycelium weight and 2.39% of dry mycelium weight, respectively, were higher than those of the others. Lectin activity was only found in the fruiting body of Pnoliota adipose. The result showed that all of the tested wild mushroom exhibited the phosphatase activity, and the activity of Lasiosphaera fenzlii was the highest at 339.91 U/mg. Suillus brevipes and Lasiosphaera fenzlii were found with slight laccase activity at of 0.341 U/mg and 0.438 U/mg, respectively. Proteinase activity was not found in the tested mushroom. All in all, Pnoliota adipose, with high protein and polysaccharide contents, as well as Lasiosphaera fenzlii, with high phosphatase activity, can be considered as advanced materials in process investigation.

Keywords: protein content enzyme polysaccharide content lectin

收稿日期 2010-05-28 **修回日期** 2010-07-08 **网络版发布日期** 2011-03-01

DOI:

基金项目:

国家科技支撑计划项目

通讯作者: 赵爽 北京农林科学院植保环保研究所，北京100097

作者简介:

作者Email: shuangzhaow@126.com

参考文献：

本刊中的类似文章