

PENGARUH UKURAN MESH AYAKAN TERHADAP KARAKTERISTIK KIMIA TEPUNG PORANG (*Amorphophallus muelleri* Blume)

INTISARI

Oleh:

M ALAN ASRORUN NUFUS

19/446861/TP/12664

Tepung porang (*Amorphophallus muelleri* Blume) merupakan produk antara berbahan dasar umbi porang yang memiliki kandungan utama glukomanan. Tepung porang diproduksi melalui proses mekanis. Selain glukomanan, tepung porang juga mengandung komponen lain seperti pati dan kalsium oksalat. Komponen tersebut disebut impuritis yang berpengaruh terhadap kualitas tepung porang. Tujuan dari penelitian ini adalah untuk mengetahui pengaruh ukuran mesh ayakan terhadap karakteristik kimia tepung porang. Melalui hasil penelitian ini akan digunakan untuk memilih ukuran mesh berapa yang akan masuk ke proses penghembusan dan yang digiling ulang. Ukuran mesh yang digunakan dalam penelitian ini adalah 30, 40, 50, 60, 80, 100, dan, 120 mesh. Tepung porang ukuran mesh 30 (TP30) memiliki kadar air 16,64%, kadar glukomanan (%db) 55,17%, kadar pati (%db) 33,59%, dan kadar kalsium oksalat (%db) 0,41%. Tepung porang ukuran mesh 40 (TP40) memiliki kadar air 17,24%, kadar glukomanan (%db) 60,71%, kadar pati (%db) 38,63%, dan kadar kalsium oksalat (%db) 0,23%. Tepung porang ukuran mesh 50 (TP50) memiliki kadar air 16,53%, kadar glukomanan (%db) 63,15%, kadar pati (%db) 31,08%, dan kadar kalsium oksalat (%db) 0,30%. Tepung porang ukuran mesh 60 (TP60) memiliki kadar air 16,4%, kadar glukomanan (%db) 51,01%, kadar pati (%db) 44,64%, dan kadar kalsium oksalat (%db) 0,43%. Tepung porang ukuran mesh 80 (TP80) memiliki kadar air 15,84%, kadar glukomanan (%db) 36,01%, kadar pati (%db) 55,96%, dan kadar kalsium oksalat (%db) 0,66%. Tepung porang ukuran mesh 100 (TP100) memiliki kadar air 14,05%, kadar glukomanan (%db) 10,12%, kadar pati (%db) 82,34%, dan kadar kalsium oksalat (%db) 0,90%. Tepung porang ukuran mesh 120 (TP120) memiliki kadar air 13,11%, kadar glukomanan (%db) 3,27%, kadar pati (%db) 90,38%, dan kadar kalsium oksalat (%db) 0,86%. Dari hasil penelitian tersebut, ukuran mesh yang layak masuk ke proses penghembusan adalah mesh 50, 60, dan 80. Sedangkan yang digiling kembali adalah mesh 30 dan 40. Perlakuan terbaik didapatkan pada ukuran mesh 40 dan 50 yang memiliki kadar glukomanan tertinggi dan memenuhi kriteria standar komersial China tentang tepung konjak.

Kata kunci: tepung porang, glukomanan, ukuran mesh

**THE EFFECT OF SIEVE MESH SIZE ON THE CHEMICAL
CHARACTERISTICS OF PORANG FLOUR (*Amorphophallus muelleri*
Blume)**

ABSTRACT

By:

M ALAN ASRORUN NUFUS

19/446861/TP/12664

Porang flour (*Amorphophallus muelleri* Blume) is an intermediate product made from porang tubers which mainly contains glucomannan. Porang flour is produced through a mechanical process. Apart from glucomannan, porang flour also contains other components such as starch and calcium oxalate. This component is called impurities which affects the quality of porang flour. The aim of this research is to determine the effect of sieve mesh size on the chemical characteristics of porang flour. The results of this research will be used to choose what size mesh will go into the blowing process and which will be re-ground. The mesh sizes used in this research are 30, 40, 50, 60, 80, 100, and 120 mesh. Porang flour mesh size 30 (TP30) has a moisture content of 16.64%, glucomannan content (%db) 55.17%, starch content (%db) 33.59%, and calcium oxalate content (%db) 0.41%. Porang flour mesh size 40 (TP40) has a moisture content of 17.24%, glucomannan content (%db) 60.71%, starch content (%db) 38.63%, and calcium oxalate content (%db) 0.23%. Porang flour mesh size 50 (TP50) has a moisture content of 16.53%, glucomannan content (%db) 63.15%, starch content (%db) 31.08%, and calcium oxalate content (%db) 0.30%. Porang flour mesh size 60 (TP60) has a moisture content of 16.4%, glucomannan content (%db) 51.01%, starch content (%db) 44.64%, and calcium oxalate content (%db) 0.43%. Porang flour mesh size 80 (TP80) has a moisture content of 15.84%, glucomannan content (%db) 36.01%, starch content (%db) 55.96%, and calcium oxalate content (%db) 0.66%. Porang flour mesh size 100 (TP100) has a moisture content of 14.05%, glucomannan content (%db) 10.12%, starch content (%db) 82.34%, and calcium oxalate content (%db) 0.90%. Porang flour mesh size 120 (TP120) has a moisture content of 13.11%, glucomannan content (%db) 3.27%, starch content (%db) 90.38%, and calcium oxalate content (%db) 0.86%. From the results of this research, the mesh sizes that are suitable for entering the blowing process are mesh 50, 60, and 80. Meanwhile those that are re-ground are mesh 30 and 40. The best treatment is obtained at mesh sizes 40 and 50 which have the highest glucomannan content and meet the Commercial Standard for Chinese Konjac Flour.

Keywords: porang flour, glucomannan, mesh