

## BAB VI KESIMPULAN DAN SARAN

### 6.1. Kesimpulan

1. Proses penepungan tidak berpengaruh terhadap *yield* tepung dan beras hitam tetapi berpengaruh terhadap kadar senyawa bioaktif yang meliputi total fenol, total flavonoid, dan total antosianin serta aktivitas antioksidan yang meliputi kemampuan menangkap radikal bebas DPPH dan kemampuan mereduksi ion besi. Beras hitam memiliki pola meningkat lalu mengalami penurunan sedangkan tepung beras hitam memiliki pola yang cenderung berfluktuatif.
2. *Yield* tepung dan beras organik hitam tertinggi terdapat pada bulan keempat ( $12,08 \pm 0,03\%$  basis kering pada beras hitam dan  $12,31 \pm 0,29\%$  basis kering pada tepung beras hitam).
3. Kadar total fenol beras organik hitam tertinggi pada bulan ketiga ( $10,55 \pm 0,29$  mg EAG/g basis kering). Kadar total fenol tepung beras hitam cenderung stabil selama penyimpanan dengan kadar tertinggi pada bulan keenam ( $7,45 \pm 0,43$  mg EAG/g basis kering).
4. Kadar total flavonoid beras organik hitam meningkat selama penyimpanan dengan kadar tertinggi pada bulan keenam ( $1,94 \pm 0,21$  mg EK/g basis kering). Kadar total flavonoid tepung beras hitam cenderung berfluktuatif selama penyimpanan dengan kadar tertinggi pada bulan keenam ( $1,21 \pm 0,04$  mg EK/g basis kering).
5. Kadar total antosianin beras hitam mengalami peningkatan selama penyimpanan dengan kadar tertinggi pada bulan ketiga ( $0,04 \pm 0,00$  mg ES3G/g basis kering) sedangkan kadar total antosianin tepung beras hitam tertinggi terdapat pada bulan kedua ( $0,03 \pm 0,00$  mg ES3G/g basis kering).

6. Aktivitas antioksidan beras organik hitam meningkat selama penyimpanan dengan kemampuan menangkap radikal bebas DPPH tertinggi pada bulan ketiga ( $1,53 \pm 0,03$  mg EAG/g basis kering) dan kemampuan mereduksi ion besi tertinggi pada bulan keempat ( $31,31 \pm 2,05$  mg EAG/g basis kering).
7. Aktivitas antioksidan tepung beras organik hitam meningkat selama penyimpanan dengan kemampuan menangkap radikal bebas DPPH tertinggi pada bulan pertama ( $1,22 \pm 0,01$  mg EAG/g basis kering) dan kemampuan mereduksi ion besi tertinggi pada bulan kelima ( $21,85 \pm 0,50$  mg EAG/g basis kering).

## **6.2. Saran**

1. Perlu dilakukan penelitian lebih lanjut mengenai penggunaan kemasan yang dapat menahan cahaya untuk menghambat perubahan kadar senyawa bioaktif dan aktivitas antioksidan tepung beras organik.
2. Perlu dilakukan penelitian lebih lanjut mengenai variasi cara pengeringan terhadap perubahan kadar senyawa bioaktif dan aktivitas antioksidan tepung beras organik.
3. Perlu dilakukan penelitian lebih lanjut untuk mengetahui perubahan profil senyawa fenolik selama penyimpanan.

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