

PP55. DETERMINATION OF FUNCTIONAL COMPONENTS AND ANTIOXIDANT ACTIVITY OF KUOKEAMUTI

Yujie QIAO¹, Youyou ZHANG¹, Aierken TUERSUN¹, Jiaying YU¹, Abdulla YUSUF¹,
Adila ABUDUREXITI¹ *

¹College of Chemistry and Environmental Sciences, Xinjiang Laboratory of Native Medicinal and Edible Plant Resources Chemistry, Kashi University, Kashi, 844006, Xinjiang, P. R. China

*Corresponding Author. E-mail: aji_228@163.com

Kuokeamuti is a local characteristic pear with high nutritional value in Xinjiang. Kuokeamuti belongs to *Pyrus communis* L. system, which mainly grows in the southern Xinjiang region. Kuokeamuti has anti-inflammatory, antitussive, antibacterial and other effects. At present, there is a lack of research reports on Kuokeamuti in Xinjiang, so it is of great significance to conduct systematic theoretical research on Kuokeamuti.

In this paper, the contents of total flavonoids, total polyphenols, total triterpenoids and polysaccharides were determined by Al(NO₃)₃-NaNO₂-NaOH coloration method, Folin-phenol method, vanillin-glacial acetic acid-perchloric acid coloration method and sulfuric acid-phenol method, respectively. The antioxidant activities of peel, pulp and seed were studied by DPPH ; ABTS · scavenging experiment and FRAP iron ion reducing ability experiment with vitamin E as positive control.

The results showed that there were abundant sugars, flavonoids, triterpenoids and phenols in Kuokeamuti. The highest content of total flavonoids in seeds was 34.003 mg/g, the highest content of total phenols in peel was 30.748 mg/g, and the highest contents of total triterpenes and total polysaccharides in pulp were 51.074 mg/g and 69.071 mg/g. The three parts of peel, pulp and seed all have good antioxidant activity. In DPPH and FRAP methods, the highest antioxidant capacity of seeds was 143.502 and 184.969 μmol Trolox/g, respectively. In ABTS method, the highest antioxidant capacity of peel was 449.817 μmol Trolox/g, and the weakest antioxidant capacity of pulp in ABTS, DPPH and FRAP was 111.029, 33.608 and 42.966 μmol Trolox/g, respectively. This shows that the functional components in Kuokeamuti have a great relationship with their antioxidant activity.

Figure 1. Relationship between the content and antioxidant activity of different components of Kuokeamuti

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