

عنوان مقاله:

Long-term Effect of Drying Method on the Alkaloid of Atropa belladonna L. Leaves During Storage

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خلاصه مقاله:

Atropa belladonna L. is a perennial plant belonging to the Solanaceae family. The plants of Solanaceae family are the best-known source of tropane alkaloids primary hyoscyamine and scopolamine that act on the Parasympatic nervous system. The purpose of the present study was to determine the effect of storage on the alkaloid content of A. belladonna L. leaves dried by different traditional drying methods such as shade drying, sun drying, and also hot air drying at temperature of 40°C and oven drying at temperature of 60°C . Alkaloid compounds were measured after 1, 15, 30, and 60 days of storage. The alkaloids were determined by high-performance liquid chromatography (HPLC) method immediately after drying and during storage. Analysis of the experimental data revealed that the amount of total alkaloid, atropine, and scopolamine was significantly different ($p < 0.01$) for different drying methods and storage time. The total alkaloid was significantly at the lowest level in sun-dried samples while it was at the highest level in shade-dried samples. The atropine and scopolamine contents increased significantly just after one-day storage in the samples dried by hot air drying at 40°C . Storage caused fluctuation in the amount of alkaloids compounds. The atropine content decreased in the oven drying method at 60°C on the first day of storage and increased after 60 days of storage. The scopolamine content increased in the oven drying method at 60°C after 15 days of storage.

کلمات کلیدی:

Alkaloid, Atropa belladonna L, drying, Storage

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