

Alkaloid Accumulation in Different Parts and Ages of *Lycoris chinensis*

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The galanthamine, lycorine, and lycoramine content of *Lycoris chinensis* was researched during development from young to old plants, *i.e.* in seeds, ten-day-old seedlings, three-month-old seedlings, one-year-old seedlings, and perennial seedlings. Notably the alkaloid level reduced to its lowest content 10 days after seed germinating. Then the accumulation of galanthamine tended to increase with age, reaching a higher value in perennial seedlings. The production pattern of lycorine and lycoramine was found similar to that of galanthamine. Different plant organs were also evaluated for their galanthamine, lycorine, and lycoramine contents. Mature seeds had the highest content of galanthamine (671.33 $\mu\text{g/g}$ DW). Kernels, seed capsules, and root-hairs were the main repository sites for galanthamine, lycorine, and lycoramine. The leaves were the least productive organs.

Key words: *Lycoris chinensis*, Galanthamine, Alkaloid Accumulation