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Seed Germination of *Nepeta Kotschyi* Boiss. Using Gibberellin and Potassium Nitrate under Light or Dark.

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Nepeta Kotschyi Boiss. is a member of lamiaceae family and endemic for flora of Iran. Phytochemical profile of the plants contain valuable constituents such as 4a*α*,7*α*,7a*α*-nepetalactone , 4a*α*,7*α*,7a*β*-nepetalactone and cubenol, geranyl acetate, nepetalactones, dehydronepetalactone, nepetalic acid, 1,8-cineole, α-terpineol, α-citral and geraniol. Traditionally, it has been used to ameliorate diseases such as fever, dysentery, septic sores, rheumatism, diarrhea, stomach ache, vomiting, skin diseases. Because this plant is wild so there is few information about its phonological stages or cultural requirements. This study was aimed to test seed germination of the plant under some conditions. To perform experiment GA3 (0, 200, 400 and 600 mg/L) and kno3 (0, 0.1 % and 0.3 %) were prepared and seeds were exposed to them for 24 hours. Then treated seed kept under light or dark. When germination stopped after two round of measuring the germination ability was measured using some parameters such as mean germination time, germination percentage, germination velocity, time spread of germination, root length, shoot length and fresh and dry weight. The experiment performed in completely randomized design with three replications. The SPSS software was used for data analysing. The result demonstrated that GA3 200 mg/L in light condition was most effective with 46.6% germination. However, the lowest germination (13.3 %) was obtained in GA# 200 mg/L under light condition. Maximum shoot length (4.9 cm) and shortest shoot (2.1 cm) were belong to control in dark and light conditions. Also, root length was most (3.47 cm) and least (1 cm) in GA3 600 mg/L in light and 0.1 % KNO3 in dark. Similarly, other parameters were affected by treatments. In summary, GA3 200 mg/L in dark and GA3 600 mg/L in light and potassium nitrate 0.1 % improved the germination criteria.

Keywords: Nepeta, KNO3, GA3, Germination, Light

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