

A CASE STUDY

Effect of different culture media, temperature and pH on growth and sporulation of *Alternaria carthami*

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SUMMARY

All eight culture media tested encouraged better growth of *Alternaria carthami*. However, Potato dextrose agar gave significantly highest growth (90.00 mm). The second and third best culture media found were Potato malt agar (84.16 mm) and Yeast manitol agar (73.33 mm). Rest of the culture media recorded good amount of mycelial growth in the range of 41.66 mm (Yeast extract agar) to 69.16 mm (Malt extract agar). Colony growth was circular, cottony, grayish-black or olivaceous-black coloured with fair to excellent sporulation. The mean colony growth recorded with all the different temperature ranged from 5.66 mm at 5°C to 85.66 mm at 30°C. However, significantly highest mean mycelial growth (85.66 mm) was recorded at 30°C with excellent (++++) sporulation. The second and third best temperature found were 25°C (83.83 mm) and 20°C (66.33 mm). The mean colony growth recorded with all the pH values ranged from 30.50 mm at pH 4.0 to 85.83 mm at pH 6.5. However, significantly maximum mean mycelial growth (85.83 mm) was recorded at pH 6.5 with excellent (++++) sporulation. The second and third best pH values found were pH 6 (82.00 mm) and pH 7 (70.33 mm) with excellent and good sporulation, respectively.

Key Words : Culture media, Temperature, pH, *A. carthami*, Growth, Sporulation

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