

Effect of temperature on enzyme production capability of marine yeast species *Acremonium potronii* and *Rhodotorula mucilaginosa*

Marine yeasts have the potential to produce extracellular enzymes that can be utilized for important industrial applications such as pharmaceuticals. For example, amylase is utilized for digestive remedies (Saini et al. 2017), protease for scar removal and regenerative epithelia treatments (Singh et al. 2016), and lipase for treatments in Parkinson's, ant inflammatory, and antihypertensive drugs (Saini et al. 2017). This laboratory study compared enzyme production between two marine yeast species, *Acremonium potronii* (A.p.) and *Rhodotorula mucilaginosa* (R.m.) Halo diameter was used as a proxy for enzyme production of amylase, lipase, and protease in A.p. and R.m. The effect of temperature on halo size was also investigated. All three enzymes were produced for R.m and lipase and protease were produced in A.p. Halo size differed significantly between the two species; lipase assay for A.p. produced larger halos and for protease and amylase assays R.m. produced larger halos. A temperature effect was also observed in R.m. This suggests marine yeast species differ in their ability to produce different enzymes, thus the potential to utilize certain marine yeasts in specific commercial applications occurs.

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