The Effects of Low Levels of Radiation on Physarum polycephalum

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The Effects of Low Levels of Radiation on Phyasrum polycephalum LEVI HRABOS, Northwestern High School, Kokomo, Indiana, 46901 The purpose of running these experiments was to determine the effects of low levels of alpha, beta, and gamma radiation on Physarum polycephalum. To test the effects, 5 alpha isotopes of Po-210, 5 beta isotopes of Sr-90, and 5 gamma isotopes of Co-60 were placed in their own sterile petri dish. A piece of filter paper was then placed on top of the sources. A colony of Physarum polycephalum was then placed in the middle of the filter paper. Oats were spread around the petri dish and water was added. 5 controls were ran as well and in the control there was no source of radiation in the petri dish. The 5 petri dishes with alpha were placed in their own container and their own room. This was done with the control, beta, and gamma groups as well. The percent of petri dish covered and the MREM/hr given off by the sources were measured daily for 5 days. On day 5 every petri dish with a source of radiation was 100% covered with slime mold, this was also true with the control. This data shows that Physarum polycephalum is not affected by low levels of radiation. This disproved the hypothesis that the radiation would inhibit the growth of Physarum polycephalum.

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