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Posted by Anonymous on Wed, 2019-02-13 16:23

Method for testing pH and catalase in liver: I am looking for materials and method for a practical that tests pH and catalase in liver for year 12 biology.

The idea is to use detergent to measure foam levels, buffer solutions and universal indicator with chopped up liver using a range of pH. (optimal level is 7). Do you have a recommended experiment?

Voting:



No votes yet

Year Level:

Senior Secondary

Laboratory Technicians:

Laboratory Technicians

Showing 1-2 of 2 Responses

Answer by labsupport on question pH and enzymes (catalase in liver)

Submitted by sat on 13 February 2019

Answer updated 17/01/2023

The Biology Corner website has an investigation on enzymes (https://www.biologycorner.com/worksheets/enzyme_lab.html) that is well set out and may be suitable for your needs. It does not include the use of detergent; however, you could add universal indicator and some detergent to Part D to achieve the outcome you are looking for. As with all new activities, it is recommended that you and/or your technician trial the activity to ensure that it suits your purposes and is workable.

Alternative experiments:

'Factors affecting enzyme activity', Nuffield Foundation, <https://practicalbiology.org/bio-molecules/factors-affecting-enzyme-activity> (Accessed Jan 2023). Some examples of a range of different enzymes and activities.

'Liver Stinks!', Science Buddies, https://www.sciencebuddies.org/science-fair-projects/project-ideas/BioChem_p030/biotechnology-techniques/liver-stinks (Accessed Jan 2023). An activity testing under different conditions without test tubes.

'Practical Enzyme Experiments Anyone Can Do', Practical Biology: science for everyone, <https://practicalbio.blogspot.com/2012/11/easy-enzyme-experiments-anyone-can-do.html> Accessed Jan 2023). A blog on enzymes including two activities using the catalase enzyme.

'The Effect of Hydrogen Peroxide on Liver: Hypothesis, Apparatus, Method', Schoolworkhelper website, <https://schoolworkhelper.net/the-effect-of-hydrogen-peroxide-on-liver-hypothesis-apparatus-method/> (Accessed Jan 2023). Includes some general information and an experiment.

'The Liver: Helping Enzymes Help You!', Scientific American website, <https://www.scientificamerican.com/article/bring-science-home-liver-helping-enzymes/> (Accessed Jan 2023). An activity testing under different conditions without test tubes.

Method for testing pH and catalase in liver for Yr 12 biology

Submitted by on 19 February 2019

Rather than using liver, consider using grated potato. Method: place 2g of freshly grated potato into a 25 or 50ml measuring cylinder. Add 2-5ml of water or buffer depending on your variable. Add a drop or two of detergent and Mix. Add 1ml 3% hydrogen peroxide. Read the height of the foam column after a set time. potato is much nicer to clean up than liver especially if temperature is your variable.

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