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Pedagogical Innovation: Coverage of labs beyond the experiments

This innovation extends lab coverage beyond standard experiments by incorporating industry-based case studies, pilot-scale simulations, and virtual food processing platforms. B.Tech Food Technology students engage in real-world problem-solving, advanced quality analysis, and new product development, fostering critical thinking, innovation, and industry readiness aligned with modern food technology practices.



Preparation of Guava Leather at Lab

Assessment Innovation- Extempore role plays, debates, and group discussions are held

Extempore, role plays, debates, and group discussions are conducted to enhance critical thinking, communication skills, and subject comprehension for B.Tech Food Technology students. These interactive methods encourage real-time problem-solving, team collaboration, and decision-making, outcome-based education approach while fostering practical knowledge application and industry readiness in diverse food technology scenarios.



Digital Innovation- Usage of Virtual Labs links

Usage of virtual lab links allows B.Tech Food Technology students to perform experiments in a simulated environment. This innovation enhances practical learning, provides access to advanced food processing techniques, and supports remote education. It fosters a deeper understanding of complex concepts on technology integration and industry-oriented education.

The screenshot shows the VALUE @ Amrita website interface. At the top, there is a navigation bar with links: Home, Project, Workshop, Nodal Centres, News & Events, Publications, Survey, Contact us, and Login. A search bar is also present, indicating it is enhanced by Google. The main heading is 'Qualitative Analysis of Carbohydrates'. Below the heading is a row of icons for 'Theory', 'Procedure', 'Self Evaluation', 'Animation', 'Assignment', 'Reference', 'Feedback', and 'NPTEL Video'. The 'Objective' section states: 'To characterize carbohydrates present in an unknown solution on the basis of various chemical assays.' The 'Theory' section explains that carbohydrates are polyhydroxy aldehydes and ketones or substances that hydrolyze to yield polyhydroxy aldehydes and ketones, with aldehydes (-CHO) and ketones (=CO) being the major groups. A chemical structure of a pyranose ring is shown, with labels for CH₂OH, H, OH, and H. A 'Simulator' button with a right-pointing arrow is located on the right side of the page.

Objective:
To characterize carbohydrates present in an unknown solution on the basis of various chemical assays.

Theory:
Carbohydrates are polyhydroxy aldehydes and ketones or substances that hydrolyze to yield polyhydroxy aldehydes and ketones. Aldehydes (-CHO) and ketones (=CO) constitute the major groups in carbohydrates.

Chemical Structure:
O[C@H]1O[C@@H](O)[C@H](O)[C@@H](O)[C@H]1O

Simulator >>