

CHEMISTRY

Chairman: F. B. WADE, Shortridge High School, Indianapolis

C. W. Holl, Manchester College, was elected chairman of the section for 1945.

Sweet white potatoes. W. E. THRUN and ELSIE REESE, Valparaiso University.—Katahdin potatoes stored in a dugout became sweet to the taste after the storage temperature in the presence of a farm lantern had become low enough to cause frost on the walls. Aqueous and 95 per cent alcohol extracts, the latter after evaporation to dryness and dissolving residue in water, showed definite reduction in Benedict's solution and positive reactions with Seliwanoff's reagent and definite levo-rotation, thus presumptively indicating the presence of fructose. Estimations of fructose were made colorimetrically after extracting the colored compound resulting from the Seliwanoff reaction into isoamyl alcohol. Two samples showed 4.0 per cent and 2.3 per cent, while polariscopic readings of the same 95 per cent alcohol extracts of thin slices indicated 1.5 per cent and 1.0 per cent respectively. The discrepancy is probably due to the presence of sucrose and glucose. Denny and Thornton, who have made low temperature storage investigations on potatoes at the Boyce Thompson Institute, mention the presence of sucrose and reducing sugars, but do not report comparatively high fructose content. It can then be presumed that the unsaturated gases emanating from the kerosene lantern were responsible for the abnormal fructose content of the potatoes. The sweet potatoes lost their sweet taste after storage at room temperature for a week, and an alcoholic extract of them showed dextro-rotation.