

MONTHLY REPORT OF VICTOR R. DEITZ

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Preliminary decolorization experiments of a raw sugar liquor with several bonechar samples have been completed. It will be recalled that one of the objects of the present research is to correlate the extent of surface area with adsorptivity. We have, for example, four chars whose total surface areas, as determined from the nitrogen adsorption isotherms, are in the ratio 3 : 2: 1.5: 1. We would like at present to see if the decolorization efficiencies are not in the same ratio.

We have not as yet been able to obtain a satisfactory set of conditions to make a fair test of this thesis. Among the variables with which one must reckon are: (1) time of contact between char and liquor necessary to obtain a steady color reading and a steady pH value; (2) one must watch among the several chars for selective as well as general decolorization by noting the wave length dependency of the transmission curve; (3) the temperature and the Brix must of course be controlled; (4) the dependency of the decolorization on pH makes the normal initial pH of the liquor and the adjusted initial pH important variables; (5) standard char conditions must be maintained; for although sample portions of the same char are used, it is necessary to give the char used for decolorization the same heat treatment in vacuum as the char received during the measurement of the total surface area with nitrogen; (6) control tests for the original liquor must be included. A procedure is being devised to take these known variables into account.

The divisional meetings of the American Chemical Society were attended at Detroit, Michigan during the period September 9 to 13th.

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