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A Comparison of Grades in Chemistry with the Same and with Different Instructors

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This method is in actual use at the present time. It has been found that by modifying this treatment a zeolite with greater water softening power is obtained. The sand is first treated with a concentrated calcium chloride solution, and subsequently with a concentrated sodium chloride solution. The sand is then rapidly heated to a temperature of about 800°C and is then quenched in a salt solution.

A COMPARISON OF GRADES IN CHEMISTRY WITH THE SAME AND WITH DIFFERENT INSTRUCTORS

F. E. BROWN AND KENNETH L. BIRD

An analysis of 10453 enrollments in freshman chemistry was made. Of these 3648 had the same instructor in recitation and laboratory, and 6805 had different instructors. 5.4% of those having the same instructor failed; 8.3% of those having different instructors failed. 3.1% of those having the same instructor received a grade of 95% or above; only 1.9% of those having different instructors received a grade of 95% or above. Taking 80% as the dividing point, of those having the same instructor 41.6% were below and 58.4% above. Of those having different instructors 48.9% were below 80% and 51.1% above. The test and final examination grades are not so uniform as these final grades but in general the better grades are received by those who have the same instructor in recitation and laboratory.

SPONTANEOUS DECOMPOSITION TEMPERATURES OF POTASSIUM CHLORATE—IRON OXIDE MIXTURES

F. E. BROWN AND W. C. O. WHITE

Potassium chlorate and the oxides of iron were mixed in varying proportions and the spontaneous decomposition temperatures of the mixtures determined. Fe_3O_4 prepared at high temperatures exerted very little catalytic effect and no rapid evolution occurred below 374° in a mixture whose composition was KClO_3 : Fe_3O_4 ::1:1. A monohydrate of Fe_3O_4 prepared by precipitation was magnetic as precipitated. A 1:1 mixture of this oxide with KClO_3 suffered spontaneous decomposition at 294°. A freshly prepared sample of Fe_2O_3 was used with KClO_3 . Spontaneous decomposition occurred at 235°. A sudden evolution of Cl_2 occurred at 120°. The Cl_2 evolved at 120° was from NH_4Cl