	Part of the organism used	Number of individuals tested ♀	♂
Mice	blood	12	9
Sheep	blood	2	2
Pigeon	blood serum	3	3
Fruit flies (Drosophila virilis)	.5–1.5 g. of flies	2	2
Cladocera sp.	.2 g. of animals	3	2
Salix sp.	catkins	5	7
Populus sp.	catkins	2	6

It may be noted that the reaction is very sensitive. A slight mistake in the method or fault in the material may give inconclusive results. It should be mentioned that nine more male mice than these previously listed were used in investigations. Six of them gave inconclusive results and with the other three a reaction was obtained which was classified as female. It is very likely that in those cases, due to our unfamiliarity with technic, reacting enzymes were destroyed and the expected reaction failed to occur.

As pointed out by Manoilov in making the chlorophyll extract, it is essential not to have alcohol stronger than 60 per cent. and not to leave the material in alcohol over 24 hours. Otherwise the enzymes which produce the reaction are likely to be destroyed.

The authors are indebted to Dr. C. B. Davenport for mice and sheep material, to Dr. A. M. Banta for Cladoceras and to Dr. O. Riddle for pigeon material.

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HYDROGEN-MAGNESIUM HALIDES[1]

THE intermediate formation of hydrogen-magnesium halides is postulated in current theories to account for the reducing action of the Grignard reagent on the carbonyl linkage. Several attempts have been made to prepare such compounds: first, the action of hydrogen halides on magnesium at low temperatures; second, the heating of sec-butylmagnesium bromide at 150° in a high vacuum, and, third, the catalytic reduction of RMgX compounds. Catalytic reduction of triphenylmethyl-magnesium chloride gave results which are indicative of the formation of hydrogen-magnesium chloride.

The reaction of RMgX compounds with azo compounds and the formation of colored intermediate compounds when the Grignard reagent reacts with carbonyl compounds suggests the intermediate formation of magnesium halides analogous to the metal ketyls. The free radical (R) so formed then dissociates to give hydrogen and the corresponding unsaturated compound. This hydrogen then combines with the trivalent carbon.

RUSSELL M. PICKENS

[1] Abstract of a paper presented before the meeting of the American Chemical Society at Baltimore.

THE AMERICAN CHEMICAL SOCIETY[1]

The use of the sodium salt of dimethylglyoxime for the qualitative and quantitative determination of nickel: WALDO L. SEMON and GILBERT SWART. Dimethylglyoxime forms a crystalline hydrated sodium salt. It is extremely soluble in water and insoluble in alcohol. A 3 per cent. (0.1M) *aqueous* solution is recommended for use in qualitative and quantitative analysis to replace the 1 per cent. alcoholic solution of dimethylglyoxime. Analyses for Ni are given in the presence of Co, Cr, Mn, Zn and Fe and in various alloy steels.

Esters of 3-amino-4-hydroxymethyl-benzoic acid: FRANCIS H. CASE. Ethyl 3-amino-4-hydroxymethyl-benzoate is prepared as follows: p-cyanobenzyl chloride is nitrated, and the 3-nitro-4-chloromethyl-benzonitrile converted to the acetate. This compound on hydrolysis with alcoholic hydrogen chloride yields ethyl 3-nitro-4-hydroxymethyl-benzoate. The latter is reduced to the amino ester by tin and alcoholic hydrogen chloride. Better yields were obtained with colloidal platinum in acetic acid solution. The butyl amino ester is similarly prepared from the butyl nitro ester. The hydrochlorides are soluble in water. The local anesthetic action of these esters will be investigated. A simple method of preparing p-chloromethyl benzoic acid has been found, in which the corresponding nitrile is hydrolyzed with conc. HCl, and the acid recrystallized from alcohol; yield, 80 per cent. On attempted recrystallization from water, p-hydroxymethyl benzoic acid results. Under the same hydrolytic conditions p-cyanobenzyl bromide is also converted into p-chloromethyl benzoic acid.

The reactivity of the hydroxyl group in certain alcohols: JAMES F. NORRIS and HENRY D. HIRSCH. The reactivity of the hydroxyl group in nine straight chain aliphatic alcohols was measured by determinations of their rates of reaction with aqueous hydrobromic acid at 100°. The rates were found to be related in a quantitative manner to the structure of the alcohols. If a

[1] The Los Angeles Meeting, August, 1925, of the Divisions of Organic Chemistry and of Medicinal Products.