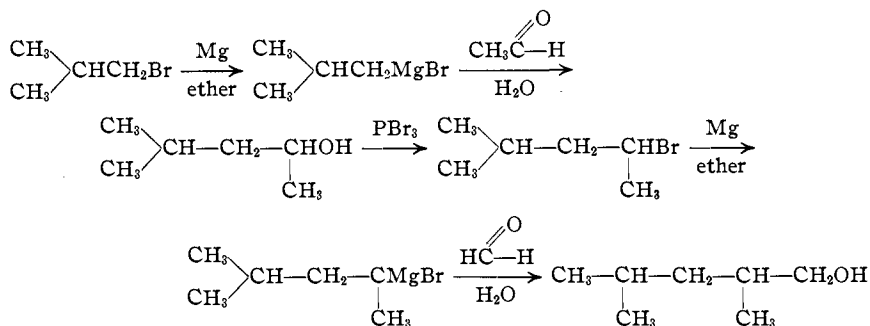


## NOTES

**Synthesis and Characterization of 2,4-Dimethylpentanol-1.**—Several new higher alcohols have been isolated from the products formed by the reduction of carbon monoxide by hydrogen.<sup>1</sup> One of these, 2,4-dimethylpentanol-1, has now been synthesized and characterized. The synthesis was accomplished by the following series of reactions



All of these preparations were carried out according to the usual methods, so no details of the preparations will be given except to mention the yields and the physical properties of the compounds.

From 274 g. of isobutyl bromide, 50 g. of magnesium and 90 g. of acetaldehyde there was obtained 100 g. (49% of the theoretical amount) of 4-methylpentanol-2 boiling at 129–131°. The bromide was prepared from 102 g. of this alcohol and 100 g. of phosphorus tribromide. The yield was 101 g. (61% of the theoretical amount) of a product which boiled at 130–132°. The 2,4-dimethylpentanol-1 was prepared from 101 g. of this bromide, 18 g. of magnesium and an excess of formaldehyde. The new alcohol boiled at 160–162° at ordinary pressure or at 65–67° (18 mm.). The yield was 22 g. (30% of the theoretical amount),  $d_4^{20}$  0.793;  $n_D^{20}$  1.427.

To characterize the new alcohol the 3-nitrophthalate was prepared according to the method of Nicolet and Sacks.<sup>2</sup> This derivative melted at 154–155° and titration gave a neutral equivalent of 311, whereas the theoretical value is 309.

*Anal.* (Micro Dumas). Calcd. for  $\text{C}_{15}\text{H}_{19}\text{O}_6\text{N}$ : N, 4.53. Found: N, 4.3.

CONTRIBUTION FROM THE  
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<sup>1</sup> Graves, *Ind. Eng. Chem.*, **23**, 1381 (1931).

<sup>2</sup> Nicolet and Sacks, *THIS JOURNAL*, **47**, 2348 (1925).