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XLIV.—CONTRIBUTIONS FROM THE LABORATORY OF THE ROYAL COLLEGE OF CHEMISTRY, SOUTH KEN-SINGTON.

On the Reduction of Cinnylic Alcohol.

By FRANK HATTON and W. R. HODGKINSON.

WHEN cinnylic alcohol is acted upon by sodium-amalgam in the presence of a large quantity of water, almost the sole product is β -phenylpropylic alcohol. when, however, an amalgam containing about 15 per cent. of sodium is employed and only a small amount of water, so that a strong sodic hydrate solution results, the reaction proceeds much further.

For the experiment cinnylic alcohol from storax, boiling between 248° and 252° , was digested in a steam-bath with sodium-amalgam of above-mentioned strength for three or four days, at the end

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of which time water was added, and the whole distilled in steam. A considerable amount of an oily body came over with the water, which, on evaporation and distillation, gave a fraction boiling between 140° and 147° , having a strong odour of cinnamene, and giving on analysis:—

From I. 0.1520	CO_2 .	0.5180
	OH_2 .	0.1030
" II. 0·0615	CO_2 .	0.3195
	OH_2 .	0.0938
I.	II.	Theory for C ₈ H ₈
C 92.89	92.85	92.30
H 7.50	7.27	7.69

The aqueous portion of the distillate separated from the cinnamene was neutral to test-papers, but rapidly decolorised a solution of potassic permanganate. It was therefore treated with a solution of this salt until a slight colour remained, when it was evaporated to dryness on a steam-bath. The resulting potassic salt gave all the reactions of formic acid. It was converted into a lead salt, and a lead determination made:—

I.	0.2800 substa	ince gave (·2120 PbO.
II.	0.5310	" 0	•5410 PbSO4.
	Ι.	II.	Theory.
Ι	70.00	69.63	69.80

The ultimate reactions may therefore be represented thus :----

 C_6H_5 .CH:CH.CH₂.OH + $H_2 = C_6H_5$.CH:CH₂ + CH₃.OH.

Neither α - nor β -phenylpropylene appears to be formed when the cinnylic alcohol is nearly anhydrous, although the latter is formed when considerable quantities of solutions of cinnylic alcohol in warm dilute potassic hydrate are treated with zinc.