

THIS OPINION WAS NOT WRITTEN FOR PUBLICATION

The opinion in support of the decision being entered today  
(1) was not written for publication in a law journal and  
(2) is not binding precedent of the Board.

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

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Ex parte JURGEN WEBER,  
DETLEF KAMPMANN,  
DETLEF DEYMANN AND  
CLAUS KNIEP

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Appeal No. 94-3251  
Application 08/071,690<sup>1</sup>

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HEARD: FEBRUARY 3, 1998

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Before Ronald H. Smith, Weiffenbach, and Pak, Administrative  
Patent Judges.

Ronald H. Smith, Administrative Patent Judge.

DECISION ON APPEAL

This is an appeal from the final rejection of claims 1-22,  
all the pending claims in the application.

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<sup>1</sup> Application for patent filed January 28, 1993. According to applicants, this application is a continuation of Application 07/788,548, filed November 6, 1991 (abandoned).



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Appealed claim 1 is drawn to a process for preparing a secondary amine comprising a first reaction of an aldehyde and a primary amine to produce a Schiff base and water, and after removing the water, a second reaction of the Schiff base with methylamine and hydrogen in the presence of a hydrogenation catalyst. As disclosed in appellants' specification, the claimed process for producing secondary amines results in a reduction of undesired by-products and an increased yield compared to prior art processes for producing secondary amines.

The Terada reference relied on in the examiner's rejection is directed to a two-step process for preparing primary amines. As pointed out by appellants on page 2 of their brief, there is no teaching in the Terada reference of a reaction to form a secondary amine as in the appellants' process.<sup>2</sup> Terada's process involves a first reaction of an aldehyde and a primary amine to form a Schiff base, and a second reaction in which the Schiff base is hydrogenated in the presence of ammonia and a catalyst. The examiner urges on page 4 of his answer that the Terada process is analogous to the process of claim 1 and differs in

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<sup>2</sup>Terada does disclose on page 4 that with the primary amines formed as raw materials, "secondary or tertiary amines could be manufactured arbitrarily by reacting with organic carbonyl compounds and by hydrogenation." This is the process disclosed by appellants as the prior art process for preparing secondary amines.

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that claim 1 reacts the Schiff base with methyl amine and hydrogen, whereas Terada hydrogenates the Schiff base in the presence of ammonia. Thus, the examiner urges that appellant "has employed a methyl homolog of the prior art starting material, and obtained the expected corresponding homologous final product."

We disagree with the examiner's assertion that methyl amine is a methyl homolog of ammonia. Adjacent methyl homologs are organic compounds that are members of a homologous series of compounds where each compound differs successively by a methylene group ( $\text{CH}_2$ ). In re Henze, 181 F.2d 196, 85 USPQ 261 (CCPA 1950); In re Jones, 149 F.2d 501, 65 USPQ 480 (CCPA 1945). Ammonia is an inorganic compound and is not part of a homologous series of organic compounds in our view. As pointed out by appellants on page 8 of their brief, the properties of ammonia are significantly different from those of organic amines, such that one of ordinary skill in the art would not expect that methyl amine would behave similarly to ammonia. The examiner has presented no evidence that one of ordinary skill in the art would have been motivated to modify the Terada process of making primary amines

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by substituting a methyl amine for ammonia in the hydrogenation reaction. Accordingly, it is our view that the examiner has not established a prima facie case of obviousness.

The decision of the examiner is reversed.

REVERSED

Ronald H. Smith	)	
Administrative Patent Judge	)	
	)	
	)	
	)	
Cameron Weiffenbach	)	BOARD OF PATENT
Administrative Patent Judge	)	APPEALS AND
	)	INTERFERENCES
	)	
	)	
Chung K. Pak	)	
Administrative Patent Judge	)	

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