(a) In many cases of accidental death due to Darvon, the blood nor-propoxyphene levels are in this 1 to 3 micrograms per milliliter range with propoxyphene levels much lower, often less than one, as in the patients cited above. This is different than one would see in the suicide cases.

(b) Comparable blood levels, 1 to 3 micrograms per milliliter, of nor-propoxyphene in animals can cause significant blocking of conduction through the heart, a toxicity which can lead to arrhythmias

and death.

Although the medical literature, because of people who had taken Darvon and developed toxicity, as long as 15 years ago, contained many cases of Darvon poisoning in which patients had abnormal electrocardigrams showing an inhibition of electrical conduction through the heart and although many Darvon deaths were said to be of cardiac origin, the first animal study on the cardiac toxicity of propoxyphene and nor-propoxyphene was not done until 1976 by the major manufacturer, Eli Lilly.

From a source within Lilly, we have obtained an 11-page progress

report of dog experiments, dated February 16 to August 15, 1976.

On March 17, 1977, a short one-half page abstract of this study—omitting critical information—was sent by Lilly to FDA with a note that "a complete presentation of this data will be submitted in a

manuscript that is now being prepared."

As of several weeks ago, when I forwarded this report to FDA and almost 2 years after Lilly's promise to FDA, the "complete presentation" had not been sent to FDA by Lilly nor has it ever been published. A stamp on the top of the report says it should "not be published or disclosed to unauthorized persons without the specific written permission of Dr. I. H. Slater."

The half-page abstract was published, but it does not contain important information in the study provided to us from sources inside of

the company

Whereas, on a legal technicality, apparently consideration is being

given to reprimanding the company for this.

A stamp on top of the report, without specific permission of Dr. Slater, was put on it, and also it mentions it should be kept locked up.

I think it is an interesting commentary that the company decides to keep to itself, for all practical purposes, critical information about a drug so widely used which the company sells, and makes a fortune from.

The study showed that both propoxyphene and nor-propoxyphene could cause inhibition of cardiac electrical conduction in the 1 to 3 micrograms per milliliter range and that nor-propoxyphene was even more potent than propoxyphene in one important type of inhibition.

There is a range level of nor-propoxyphene 1 to 3 microgram range, that people using the drug on a regular basis, at or even as little as

twice above the recommended dose can get in their blood.

Although the Lilly study says the blood concentrations of propoxyphene and nor-propoxyphene were "substantially higher than required

¹ Personal communcation, Dr. Boyd Stevens, coroner, San Francisco, and Dr. Larry Lewman, deputy coroner, State of Oregon.