



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

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JAN 27 1989

OFFICE OF
PESTICIDES AND TOXIC SUBSTANCES

MEMORANDUM

SUBJECT: EPA Reg No. 100-632. Nitrosamine Analysis for Ciba-Geigy's technical cyromazine. MRID No. 409421-01. Branch No. 4784.

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In response to A. Smith's 11/10/88 memo Ciba-Geigy has submitted a nitrosamine analysis of their product **Technical Cyromazine**.

Nitrosamine analysis was performed by Thermedics, Inc., using HPLC/TEA. Sample preparation entailed mixing one gram of sample with 2 mL ethyl acetate (for polar nitrosamines; with pentane for non-polar), shaking, vortexing, and centrifugation. The supernatant was clarified using a 0.45 um filter. Aliquots were analyzed by HPLC-TEA. An amino column with isooctane/dichloromethane/methanol mobile phase was used for polar nitrosamines. A Silica column with 7% acetone/93% isooctane solvent system was used for non-polars. Each sample was fortified with 1450 ppb N-nitrosodiisopropanolamine (NDiPIA) for polars and with 690 ppb N-nitrosodiethylamine (NDEA) for non-polars. Recoveries reported were 88 and 73%, respectively, for NDiPIA and NDEA, and were stated to be linear down to their respective detection limit levels of 100 ppb and 20 ppb.

No nitrosamines were detected in any of the ten samples (duplicates from 5 batches, of which 4 were "registration samples"). Raw data was provided for the latter.

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Conclusions

We conclude that these Thermedic methods for polar and non-polar nitrosamines are valid. Reported levels of nitrosamine were "not detected". The limit of detection was given at 100 ppb for polar nitrosamines; 20 ppb for non-polars. This response fulfills the nitrosamine data requirement for Ciba-Geigy's product Technical Cyromazine, EPA Reg No. 100-632, as stated in the aforecited memo.

cc: K. Dockter (DEB), Nitrosamines S.F., E. Eldredge
(ISB/PMSD), Circulation (7), RF.

RDI: ARRathman:1/23/88:RDSchmitt:1/23/88

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