



May 25, 2018

To Whom It May Concern,

Please find attached two separate published articles addressing deficiencies in a recent article titled “Prenatal Naled and Chlorpyrifos Exposure is Associated with Deficits in Infant Motor Function in a Cohort of Chinese Infants” Silver et al., Environ Int., 2017 September 106:248–256. In addition to the concerns addressed in the study, a comprehensive review indicated that no Naled was produced or actually being applied in China during the time period indicated in the study. AMVAC took the initiative to challenge this study and submitted a rebuttal paper, which has recently been published. The basis for the rebuttal is summarized below and the complete publications are attached for your reference.

AMVAC Chemical corporation reviewed this study in detail and had specific concerns on the analytical methodology used in this study. In summary, the mass spectral analysis of Naled, specifically its identification and quantification was challenged. AMVAC provide analytical data and rationale to support the criticism of the reported work. Mass spectral data for Naled (analytical standard grade) under a variety of mass spectrometric conditions were generated in an attempt to obtain a fragmentation pattern similar to what was reported in Silver et al., 2017. The findings did not reproduce a similar fragmentation pattern under any of the tested experimental conditions. AMVAC studies however aligned with the National Institute of Standards and Technology (NIST) database, a widely recognized resource for such compounds. The conclusion was that Naled was in all probability misidentified in the reported study (Silver et al., 2017) which consequently raises serious questions regarding the quantification of Naled in the blood samples thus placing the entire statistical correlation of Naled as a contributor to the impairment of motor function in infants in question.

An independent consultant who has vast scientific knowledge and history on the use of Naled authored the second publication. The author identified erroneous correlations reported in the studies. The lack of a sufficient description of the methods used in the study was repeated as well as how the identification and quantification of Naled was performed in a myriad of pesticides. Fundamental concerns about the study questioned the validity of cord blood plasma analyses of Naled. The validation of the assay in serum, not plasma and the prolonged storage period in the absence of data to insure the stability over the same time and the lack of appropriate recovery data also was questionable and a request for re-evaluation has been made.

Please feel free to contact me if you have any additional questions pertaining to AMVAC’s position on this study.

Sincerely,

A handwritten signature in blue ink that reads 'Anne Turnbough'.

Anne Turnbough Ph.D.  
V.P. Global, Regulatory Affairs

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