

NOTES ON CERTAIN DATA AVAILABLE IN KETTERING LABORATORY EXPERIENCE

Lead Content of Milk from Cow Fed on Contaminated Forage*

<u>Date</u>	<u>Identification</u>	<u>Lead in Mg. per liter</u> <u>(p.p.m.)</u>	<u>Remarks</u>
5-7-64	First	0.016	Prior to being fed on contaminated forage
5-15-64	Second	0.020	End of first week of feeding
5-22-64	Third	0.085	End of second week of feeding
5-29-64	Fourth & Final	0.075	End of third week of feeding

*Silage as fed contained 44.5 mg. Pb per kg. (p.p.m.)

Lead Content of Feed Responsible for Poisoning Dairy Cows

<u>Article</u>	<u>Lead Content in Mg. per kg. (p.p.m.)</u>	
Ground Silage	66.8	
Ground Corn	20.0	
Corn Silage	25.90	
Control Sample of Corn Silage	0.50	from farm outside affected area
<u>Forage Crops in Fresh Green State*</u>		
Sample A	0.039	
Sample B	0.78	* Value should be multiplied by factor of 4, to arrive at concentration of lead in partially dried product as fed to cows.
Sample C	2.32	
Sample D	0.69	
Sample E	0.62	
<u>Feed Crops from Other Farms</u>		
Corn	1.20	
Corn	0.62	
Sudan Sorghum Hybrid	1.11	
Alfalfa	0.44	

Lead Content of Tissues of Two Severely Poisoned Dairy Cows*

<u>Tissue</u>	<u>Lead in Mg. per 100 grams of fresh tissue</u>				<u>Range of "Normal" Values</u>
Liver	#1	1.61	#2	1.11	0.1 - 0.2
Kidney	#1	6.14	#2	3.90	0.05 - 0.3

* Only tissues available for checking results of previous analyses by others.

Lead Content of Tissues of Cow 23AEP3109* (From Same Herd)

<u>Tissue</u>	<u>Lead in Mg. per 100 Grams</u>	
Bone	1.21	Elevated only by 25 to 50 per cent
Liver	0.40	Elevated to about twice "normal" value
Kidney	1.10	Elevated 8 to 10-fold
Muscle	0.01	Essentially normal (always low)
Brain	0.12	Elevated 50 per cent or perhaps more

* Considering the relatively low value in bone, it is evident that the exposure of this cow was brief.

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N 7500