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**United States Patent**

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*David J. Kayros*

*Director of the United States Patent and Trademark Office*

(12) **United States Patent**  
**Schneider**

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(54) **SALIVA ASSAY TECHNIQUE FOR HEAVY METAL**

(56) **References Cited**

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(\* ) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 616 days.

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(57) **ABSTRACT**

(52) **U.S. CL.** ..... 250/282; 250/281; 73/61.41; 73/61.42; 436/73; 436/77

A method for determining heavy metal loading in a subject includes collecting a saliva sample from the subject containing a concentration of a heavy metal. The saliva sample is subjected to inductively coupled plasma mass spectrometry to yield a heavy metal loading measurement for the subject. The saliva sample is readily collected on a substrate absorbing a preselected amount of saliva such as filter paper. As the amount of saliva necessary to saturate a given volume of substrate is known, the volume of saliva within a substrate is also known. The resulting heavy metal loading measurement is readily correlated with a blood level for the heavy metal in the subject.

(58) **Field of Classification Search** ..... 250/281, 250/282; 73/61.41, 61.42; 436/73, 74, 75, 436/76, 77, 78, 79, 80, 81, 82, 83, 84  
 See application file for complete search history.

**11 Claims, 3 Drawing Sheets**

