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marked improvement in the precision of recovery and population-based estimates. It is expected to yield a

accurate estimate per subject-week as well as an

accurate estimate weekly for soil recovery.

This paper proposes a new method for predicting

ABSTRACT

A new method for estimating soil ingestion

IN CHILDREN AND ADULTS

IN CHILDREN AND ADULTS

AN IMPROVED METHOD FOR ESTIMATING SOIL INGESTION

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KEYWORDS: soil ingestion, trace, lead, diet

IN CHILDREN AND ADULTS

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REFERENCES


subject-week. The population-based food to soil ratio
composite of the best tracer ratios of each subject or
subject-week would be a random sample estimate (R.S.E., the "best estimate") for
soil ingestion estimate. In this approach, only one
subject or subject-week would be selected for each
subject, capacity for recovery would be selected for each
subject, and select the tracer with the
preparation or recovery rate.

The present paper proposes a new approach for
the sampling size (i.e., number of subjects).

The present study and increasing
soil ingestion in the subject-week to soil ratios by reducing the
soil ingestion capacity of specific tracers.

Several approaches may be used to enhance the
soil ingestion detection capacity. In fact, all the
soil ingestion detection capacity. In fact, all the
soil ingestion detection capacity.

Ingestion rate, studies the potentially high food to soil tracer
below the soil ingestion detection limit of such
soil ingestion estimates were
recognized problems in current soil ingestion studies.

This approach is designed to overcome
lower soil ingestion detection for soil ingestion

ESTIMATING SOIL INGESTION

INTRODUCTION

Ingestion rates.

Ingestion rates. Ingestion rates.

Ingestion rates. Ingestion rates.

Ingestion rates.
tracer soil ingestion estimates is important to

the value of a "best tracer" versus a range of

and soil ingestion detection level and consistency

yielded the best estimate of recovery of tracer and

which the reactivity of all subsequent population

or subject-week has a firm protocatal foundation upon

the association of the "best tracer" for a given subject

indicators and the population. However, the basis for

yielded a single soil ingestion value for both

the approach. However, the PRM, like the IIM method,

for a criticism of the

See Carabajal and Straney, (7) for a criticism of the

estimand of al., (2) and van Wijnen et al, (5) studies

and other design limitations of the

subject specific tracer showing the lowest soil

recently by van Wijnen et al, (5). The PRM is the

attenuancy proposed by Carabajal et al, (2) and more

modification of the least tracer method (LTM)

the PRM is not a totally new idea but represents a

soil ingestion detection capacity.

yielded a very low average food to soil ratio. This

advantage of this approach is that it would

Weeks.

tracer traces as derived from intendation subject.

would be compared to a variable grouping of the

369

calibrate AND STANFELD

ESTIMATING SOIL INGESTION
ESTIMATING SOIL INGESTION

the intestinal measurements. Thus, the BWM
estimate at the collection of all
pretest issue is to derive a population-based
recovery is related to a specific tracer the
water intake tracer. The precision of
projected on a population-based estimate
applied in a population-based estimate
of a specific tracer such that it cannot be
(2) IS precision of recovery strictly limited to
the population average.
be selected for each subject, subject-week or
would possibly bias a constant value, would
above noted limitations. Thus, in order to
tracers is a result of any one or more of the
by tracer. The variability seen between
theory, actual soil ingestion should not vary
tracers, highest available tracer values. In
the soil ingestion estimate should be
higher soil ingestion estimates are not dependent on the
issue needs to be addressed in a format
higher soil ingestion estimates while this
(3) Is this approach directly to have been (e.g.,
method. Is derived from an appropriate biological

IMPLICATIONS

mg-96 mg/day.

estimates (55 mg/day - 77 in the range of 9
provision in intermediate soil ingestion
sample size is small and not to have occurred
soil ratio of the seven tracers for which
the tracer that is below the lowest food to
size of the food to soil ratio. For example,
soil ingestion estimates are not dependent on the
manner, it appears there is a magnitude soil

CALABrese et al. and Dough et al. studies
a new soil ingestion estimate for the

(1) A new soil ingestion estimate for the

the implications of this approach are substantial:

(2) The estimated precision of recovery of the

(3) Substantially improved.

the data set at. A study would now be

the data set at. A study would now be

Tightly to offer a more definitive

IMPACTS

(4) The data set at. A study would now be

the data set at. A study would now be

(1) A new soil ingestion estimate for the

the implications of this approach are substantial:

CALABrese et al. and Stank

PRACTICAL CONSIDERATIONS

369

368
REFERENCES

and time. Result in a considerable saving in dollars. Studies may be much reduced. Thus would result in the testing and evaluation of soil ingestion detection capacity, the simple and portable approach could also be applied to precocious recovery and lower soil test results. Other small population-based subsites such as the above comparisons in the calabrese et al. 1990 study could be readily seen with adequate recovery estimates and may yield estimates successfully provide the precision of predicted that the BHM approach would be adequate level of detection. It is as important since the calabrese et al. 1990, were below the adult soil ingestion estimates of the calabrese et al. 1990 study. Thus is the dual soil ingestion estimates of the calabrese et al. 1990 study.