Determination of iron in stools as a method to monitor consumption of iron-fortified products in infants

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We describe a quantitative method for determination of iron in stool to monitor consumption of iron-fortified milk in infants. The method is simple, fast, and inexpensive. Stool samples from infants consuming fortified milk or nonfortified milk were ashed, and ashes were diluted in hydrochloric acid and reacted with bathophenantroline disulphonate. Mean iron excretion per subject was obtained. Anemia was present in 25.7% of infants in the nonfortified group (upper level of 95% confidence limit for mean iron excretion was 14.9 mg iron/100 g stool) and in 22.2% of infants from the noncompliant fortified group (mean excretion < 15 mg iron/100 g stool). In contrast, only 0.8% of infants who had properly consumed the fortified milk had anemia. We conclude that this method for determination of stool iron should be considered for estimating compliance in evaluation of results of field trials of iron-fortified products in infants.