Stratified Sample Collection

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Question/Issue

NIST Handbook 130 Price Verification

When doing a price verification inspection when do you use a stratified sample and what methods are available?

Definitions

Randomized: All items in an "area" have an equal chance of being included in the sample

Stratified: Focuses on specific merchandise groups that appear to have more errors than others (e.g., you find that advertised specials (sale items) in the randomized sample have more pricing errors than regular priced items).

Background

NIST HB 130 recommends using stratified sampling for stores on a re-inspection when errors were found in a specific merchandise group. The "stratified" approach may be used the first time you inspect a store, in stores that have just implemented scanning, in stores that have high error rates on particular groups of items in past inspections, or in responding to consumer complaints involving a particular group of items.

Procedure

On initial inspections, the use of randomized sampling should be the preferred method. Stratified sampling should be used when investigating a complaint on a specific department or following up on previous non-compliance in a specific department. Changing to stratified sampling is not recommended in the second stage of an initial inspection if problems surface during stage one of a price verification inspection: continue using the same sampling method throughout the whole inspection.

It is imperative that previous inspection results be reviewed in order to pinpoint problem departments or areas before conducting a stratified sample.

Whether you count sales signs, racks, generate random numbers or generate one number (ie, 5 and select the 5th rack 5th item) is immaterial, as long as the process is random. Each store is unique, tailor your inspection to fit the situation.

Diagrams of some stratified sampling plans are available in NIST HB 130 Examination Procedure for Price Verification.