

“Good Quantity Control Practices”  
“Illustration of a Simple Packaging System”

SEAFOOD INDUSTRY GUIDE

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February 1, 2011

- **PACKER CONTROL** – these are general areas directly under the packer’s control which should be considered in any quantity control program.
  - Intent – Fill Policy: Overfill/Moisture Loss
    - Are fill setting decisions being made based on the products shelf life?
    - How “accurate” and “repeatable” are your filling machines?
    - Are you making any adjustments to allow for moisture loss?
  - Economics
    - Economics will affect the decisions regarding your fill policy.
    - Risk assessment of how exact can you be without being underweight.
    - Risk considerations should include cost to repack, recall or redistribute, potential negative publicity, and damaged relations with business partners.
  - Knowledge of Weighing System
    - Do you know what your system can and cannot do (measurement capabilities)?
    - Is your equipment suitable for the environment in which it is used?
    - Are you confident scales are weighing accurately and correct net weight is being calculated? How do you know for sure?
    - Is there a routine scale maintenance program that ensures devices conform to NIST HB44?
  - Feedback
    - Do you follow through on complaints and analyze feedback regardless of source (i.e., consumers, trading partners, regulators, internal audits)? Is feedback documented?
    - Do you do root cause analysis?

- Training
  - Are employees taught company policies and procedures regarding accuracy of net weight? How is this re-enforced on a day to day basis?
  - Are processes and procedures documented so that systems can be thoroughly evaluated if problems arise?
  - Is there accountability?
  
- Supervision / Checks and Balances
  - Who is checking to be sure policies and procedures are being followed?
  - What checks and balances exist to ensure compliance?
  - Is the right person (supervisor with skills, knowledge, tools, expertise) in the position? This is a critical point because they will set the standard for integrity.
  
- Data Control
  - Who and how is product information being maintained such as tare weight, net weight, and % glazing? How (and how often) is this communicated to trading partners?
  - Are glazing machines adjusted and properly maintained?
  - Is data synchronized between trading partners?
  - What checks and balances are in place to ensure integrity of data?
  
- Labeling
  - Are you familiar with NIST HB130 “Uniform Laws and Regulations” and understand Federal and state laws and regulations?
  - Do imported products comply with U.S. labeling laws and regulations?
  - Do you know if your existing packaging meets the requirements for declaration of identity, responsibility and quantity?
  - Do you have a good working relationship with state weights and measures officials? If not, make this a priority.

- **WEIGHING ACCURACY** - Technical requirements (or official standards) exist to eliminate weights, measures and devices that are false or faulty, or that facilitate the perpetration of fraud. The items below represent some of the requirements to ensure weighing accuracy of the devices used.
  - Device Suitability
    - Is the device suitable for the application it is being used as defined by HB44 requirements?
    - Is the device NTEP (National Type Evaluation Program) approved?
    - Is device maintained with “acceptance” tolerance or “maintenance” tolerance? We strongly recommend acceptance tolerance. See the scale code in NIST HB 44 “User Requirements UR.1 <http://www.nist.gov/pml/wmd/pubs/h44-11.cfm>
  - Static/dynamic weighing
    - Will the scale used to weigh in motion or be static?
    - Is the platform secure?
    - Testing for each type of device is different.
  - Shift Test
    - Determines if a scale weighs properly as the “load” shifts, at all quadrants/areas of the scale surface area.
  - Accuracy and Maintenance
    - A piece of equipment is accurate when its performance or recorded representations conforms to the standard within applicable tolerances and other performance requirements.
    - A scale must weigh accurately at all times.
    - Maintenance refers to the intervals of testing of a device by a trained and qualified technician to ensure the device is functioning according to specification and tolerances.
    - Checking Accuracy involves performing (but not limited to) a shift test, increasing load test, capacity test, decrease load test, return to zero test, and repeatability test.
    - If product is imported and a weighing system is used outside the United States, use the legal metrology requirements of the country where the device is located.

- Tolerances
  - A value fixing the limit of allowable error or departure from true performance or value and still weigh with accuracy.
- Repeatability
  - Are test results and computations repeatable?
- Traceability of Weights
  - Weights used by the technician who performs maintenance on the scales must be traceable to national standards.
- Rounding
  - Understanding how a device rounds is important in establishing proper fill requirements and when determining tare.
  - Generally, the smaller the scale division (i.e., 0.01, 0.005, 0.002 lb) the less rounding becomes an issue.
- Sensitivity /Discrimination
  - The value of the test load on the load-receiving element of the scale that will produce a specified minimum change of rest of the indicating element(s) of the scale.
  - Is the device being used responsive enough to the speed of the operation?
- **TARE** – the weight of a container, wrapper, or other material (i.e., ice glaze) that is deducted from the gross weight to obtain the net weight. Tare, by law, must be deducted from package weight. How accurate is the application of glazing? Understand variations.
- 2 types of tare - Unused and used (result is the same)
  - Unused – all unused packaging materials (including glue, labels, ties...) that contain or enclose a product.
  - Used – Used tare material that has been air dried, or dried in a manner to simulate the unused tare weight.
- Variations in wrapping/other items
  - In a manual wrapping environment, variations in tare could occur based on an individual wrapping process.
- Material density, solder, adhesives

- Materials density, solder and adhesives affect tare weigh and must be monitored and measured regularly.
- Changing Supplier
  - This should be a red flag that packaging tare weights need to be retested. Do not take the suppliers word. Verify.
- Sample size/minimum load
  - Refers to how tare should be determined. For example, take a sample of at least 10 items of the same material. Divide the weight of the samples by the number of samples taken to arrive at tare and round up.
- Store or supplier determination
  - If packaging at store level, the store determines tare based on packaging material (wrap, stickers, soakers...) and other considerations such as moisture loss and shelf life.
  - If a supplier pre-packs product, the retailer should verify accuracy of tare used.
- Label size/number of labels
  - If packaging at store level, size and number of labels must be taken into consideration. These can change as merchandising and marketing gets creative at retail.
- Number and size of soakers
  - If packaging at store level, number and size of soaker pads will affect tare weight.
  - Amount and type of packaging material should be standardized.
- Percentage tare (glaze, individually wrapped items)
  - Scales at retail stores need to have the capability to calculate percentage tare and/or provisional tare on any item.
  - Stores are required to deduct tare for glaze packaged at store level.
  - Suppliers need to accurately communicate the percentage tare to trading partners.

- **PRODUCT** – These are factors that have a direct influence on the product.
  - Density/volume
    - Referring to package sizes.
    - Each product type should be considered separately (i.e., scallops vs. fish vs. baby cooked shrimp vs. colossal raw shrimp).
    - Know your product before filling targets are set.
  - Moisture content
    - How is it impacted by shelf life and distribution?
    - Know your product before filling targets are set.
  - Shelf life distribution
    - Net content should meet the labeled net weight for the shelf life of product.
    - Must also understand impact refrigeration has on product.
  - Environment handling
    - What impact does transportation, handling, refrigeration, and storage have on the product?