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Presented in Table 10-125 and the following equation:

\[ IR_{dw} = IR_{ww} \left( \frac{100 - W}{100} \right) \]  

(Eqn. 10-4)

Where:

- \( IR_{dw} \) = dry-weight intake rate,
- \( IR_{ww} \) = wet-weight intake rate, and
- \( W \) = percent water content.

Alternately, dry-weight residue levels in fish may be converted to wet-weight residue levels for use with wet-weight (e.g., as-consumed) intake rates, as follows:

\[ C_{ww} = C_{dw} \left( \frac{100 - W}{100} \right) \]  

(Eqn. 10-5)

Where:

- \( C_{ww} \) = wet-weight concentration,
- \( C_{dw} \) = dry-weight concentration, and
- \( W \) = percent water content.

The moisture content data presented in Table 10-125 are for selected fish taken from USDA (2007). The moisture content is based on the percent of water present.

10.9.2. Conversion Between Wet-Weight and Lipid-Weight Intake Rates

In some cases, the residue levels of contaminants in fish are reported as the concentration of contaminant per gram of fat. This may be particularly true for lipophilic compounds. When using these residue levels, the assessor should ensure consistency in the exposure-assessment calculations by using consumption rates that are based on the amount of fat consumed for the fish product of interest.

The total fat content (percent) measured and/or calculated in various fish forms (i.e., raw, cooked, smoked, etc.) for selected fish species is presented in Table 10-125, based on data from USDA (2007). The total percent fat content is based on the sum of saturated, monounsaturated, and polyunsaturated fat.

If necessary, wet-weight (e.g., as-consumed) intake rates may be converted to lipid-weight intake rates using the fat content percentages presented in Table 10-125 and the following equation:

\[ IR_{lw} = IR_{ww} \left( \frac{L}{100} \right) \]  

(Eqn. 10-6)

Where:

- \( IR_{lw} \) = lipid-weight intake rate,
- \( IR_{ww} \) = wet-weight intake rate, and
- \( L \) = percent lipid (fat) content.

Alternately, wet-weight residue levels in fish may be estimated by multiplying the levels based on fat by the fraction of fat per product as follows:

\[ C_{ww} = C_{lw} \left( \frac{L}{100} \right) \]  

(Eqn. 10-7)

Where:

- \( C_{ww} \) = wet-weight concentration,
- \( C_{lw} \) = lipid-weight concentration, and
- \( L \) = percent lipid (fat) content.

The resulting residue levels may then be used in conjunction with wet-weight (e.g., as-consumed) consumption rates. The total fat content data presented in Table 10-125 are for selected fish taken from USDA (2007).

10.10. REFERENCES FOR CHAPTER 10


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