**Section 302.666 Utilizing the Bioconcentration Factor**

The Bioconcentration Factor derived in Section 302.663 is used to calculate water quality criteria for a substance as specified below:

a) When calculating a WDAPC as described in Section 302.633, the geometric mean of all available steady-state, whole-body Bioconcentration Factors for fish and shellfish species that constitute or represent a portion of the diet of indigenous wild and domestic animal species is used. Additional considerations in deriving a Bioconcentration Factor include:

1) An edible portion Bioconcentration Factor is converted to a whole-body Bioconcentration Factor for a fish or shellfish species by multiplying the edible portion Bioconcentration Factor by the ratio of the percent lipid in the whole body to the percent lipid in the edible portion of the same species.

2) A Bioconcentration Factor calculated as described in Section 302.663(c) is converted to a whole-body Bioconcentration Factor by multiplying the calculated Bioconcentration Factor by the ratio of the percent lipid in the whole body to 7.6.

b) When calculating either a human threshold criterion or a human nonthreshold criterion as described in Sections 302.642 through 302.648 or Sections 302.651 through 302.657, respectively, the geometric mean of all available edible portion Bioconcentration Factors for fish and shellfish species consumed by humans is used. Additional considerations in deriving a Bioconcentration Factor include:

1) Edible portions include:

A) Decapods – muscle tissue.

B) Bivalve mollusks – total living tissue.

C) Scaled fish – boneless, scaleless filets including skin except for bloater chubs in which the edible portion is the whole body excluding head, scales, and viscera.

D) Smooth-skinned fish – boneless, skinless filets.

2) A whole-body Bioconcentration Factor is converted to an edible portion Bioconcentration Factor by multiplying the whole-body Bioconcentration Factor of a species by the ratio of the percent lipid in the edible portion to the percent lipid in the whole body of the same species.

3) A Bioconcentration Factor calculated as described in Section 302.663 is converted to an edible portion Bioconcentration Factor by multiplying the calculated Bioconcentration Factor by the ratio of the percent lipid in the edible portion to 7.6.

(Source: Amended at 47 Ill. Reg. 4437, effective March 23, 2023)