Long-chain PFAS such as PFOS, PFOA, and PFHxS are of concern in drinking water because of their groundwater occurrence, extreme environmental persistence, long-term effects, and potential human health effects. Unlike other well-studied PF contaminants (i.e., Dioxins and PCBs), drinking water is an important exposure route for these PFAS, low levels in drinking water can accumulate in the body, and long-term exposure may pose serious health risks. In this paper, the focus is on PFOA, PFOS, and three short-chain PFAS: PFNA, PFDA, and PFHxS, as well as some other PFAS types. In the national饮用水basis, USEPA recommended (2018) a Maximum Contaminant Level (MCL) of 0.029 L/kg/day (70 kg body wt.; 2 L/day) for PFOA, 0.029 L/kg/day (70 kg body wt.; 2 L/day) for PFOS, and 0.029 L/kg/day (70 kg body wt.; 2 L/day) for PFNA, the national acceptable daily intake. More recently, USEPA recommended a Maximum Contaminant Level Goal (MCLG) of 0.01 mg/L for PFOA and PFOS, and 0.004 mg/L for PFNA, but no legal standards are in place. The capstone point of the exposure assessment is a risk quotient (RQ) for the risk to the human being, which states that the risk to the human being is 30% or less. The risk to the human being is calculated based on a number of parameters, including the water concentration, the ingestion rate, the body weight, and the exposure assessment. The risk assessment is performed for the risk to the human being, which is calculated based on an exposure assessment of 30% or less. The risk assessment is performed in the following manner:

1. **Risk Assessment:**
   - **Water Concentration:** The water concentration is calculated based on the amount of PFAS in the water and the volume of water ingested. The water concentration is calculated as follows:
     \[
     \text{Water Concentration} = \frac{\text{Volume of Water} \times \text{PFAS Concentration}}{\text{Body Weight} \times \text{Ingestion Rate}}
     \]

2. **Ingestion Rate:** The ingestion rate is calculated based on the amount of water ingested per day and the body weight of the individual. The ingestion rate is calculated as follows:
     \[
     \text{Ingestion Rate} = \frac{\text{Volume of Water} \times \text{Body Weight}}{\text{Ingestion Rate}}
     \]

3. **Body Weight:** The body weight is calculated based on the individual's weight. The body weight is calculated as follows:
     \[
     \text{Body Weight} = \frac{\text{Body Weight} \times \text{Ingestion Rate}}{\text{Ingestion Rate}}
     \]

4. **Risk Quotient (RQ):** The risk quotient (RQ) is calculated based on the water concentration and the ingestion rate. The RQ is calculated as follows:
     \[
     \text{RQ} = \frac{\text{Water Concentration}}{\text{Ingestion Rate}}
     \]

5. **Risk Assessment:** The risk assessment is performed by calculating the RQ and comparing it to the acceptable daily intake (ADI). If the RQ is less than or equal to the ADI, the risk assessment is considered to be acceptable. If the RQ is greater than the ADI, the risk assessment is considered to be unacceptable.

The long-chain PFAS such as PFOS, PFOA, and PFHxS are of concern in drinking water because of their groundwater occurrence, extreme environmental persistence, long-term effects, and potential human health effects. Unlike other well-studied PF contaminants (i.e., Dioxins and PCBs), drinking water is an important exposure route for these PFAS, low levels in drinking water can accumulate in the body, and long-term exposure may pose serious health risks. In this paper, the focus is on PFOA, PFOS, and three short-chain PFAS: PFNA, PFDA, and PFHxS, as well as some other PFAS types. In the national饮用水basis, USEPA recommended (2018) a Maximum Contaminant Level (MCL) of 0.029 L/kg/day (70 kg body wt.; 2 L/day) for PFOA, 0.029 L/kg/day (70 kg body wt.; 2 L/day) for PFOS, and 0.029 L/kg/day (70 kg body wt.; 2 L/day) for PFNA, but no legal standards are in place. The capstone point of the exposure assessment is a risk quotient (RQ) for the risk to the human being, which states that the risk to the human being is 30% or less. The risk to the human being is calculated based on a number of parameters, including the water concentration, the ingestion rate, the body weight, and the exposure assessment. The risk assessment is performed for the risk to the human being, which is calculated based on an exposure assessment of 30% or less. The risk assessment is performed in the following manner:

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