

# UxC Fuel Quantity & Cost Calculator

Enter the known quantity into the appropriate box below. Then press the **Calculate** button to display the equivalent volumes in the various units. To calculate Component Volumes, type a value into one of the **Component Volumes** boxes and press **Calculate**.

## Assumptions

|  |  |                                     |
|--|--|-------------------------------------|
| <b>Feed Assay</b>                      | <input type="text" value="0.711"/>   | w/o                                 |
| <b>Tails Assay</b>                     | <input type="text" value="0.25"/>  | w/o                                 |
| <b>Product Assay</b>                   | <input type="text" value="4.50"/>  | w/o                                 |
| <b>U<sub>3</sub>O<sub>8</sub> Cost</b> | <input type="text" value="75.00"/>   | \$/lb U <sub>3</sub> O <sub>8</sub> |
| <b>Conversion Cost</b>                 | <input type="text" value="97.00"/>   | \$/kgU as UF <sub>6</sub>           |
| <b>UF<sub>6</sub> Cost</b>             | <input type="text" value="284.50"/>  | \$/kgU as UF <sub>6</sub>           |
| <b>SWU Cost</b>                        | <input type="text" value="190.00"/>  | \$/SWU                              |
| <b>UF<sub>6</sub> Conv. Factor</b>     | <input type="radio"/> General <input type="radio"/> Cameco <input checked="" type="radio"/> ConverDyn      |                                     |
|  | <input type="radio"/> 2.612828 <input type="radio"/> 2.61283 <input checked="" type="radio"/> 2.61285      |                                     |
| <b>Cost Basis</b>                      | <input checked="" type="radio"/> U <sub>3</sub> O <sub>8</sub> /Conv <input type="radio"/> UF <sub>6</sub> |                                     |

**Calculate**

EUP Cost **\$4,006.37**

## Optimal Tails Results

Optimal Tails **0.183** w/o  
 EUP Cost **\$3,920.47** \$/kgU EUP

## Enrichment Equations

$Feed\ to\ Product = (X_p - X_t) / (X_f - X_t)$   
 $V(x) = ((2 * x) - 100) * \ln(x / (100 - x))$   
 $SWU\ to\ Product = (V(p) - V(t)) - FtoP * (V(f) - V(t))$

SWU: Separative Work Unit  
 EUP: Enriched Uranium Product

## Enter Component Quantity

Quantity

U<sub>3</sub>O<sub>8</sub>     Pounds  
 UF<sub>6</sub>     kgU  
 SWU     SWU  
 EUP     kgU

## Component Volumes

|                               |            |        |
|-------------------------------|------------|--------|
| U <sub>3</sub> O <sub>8</sub> | <b>0.0</b> | pounds |
| UF <sub>6</sub>               | <b>0.0</b> | kgU    |
| Enrichment                    | <b>0.0</b> | SWU    |
| EUP                           | <b>0.0</b> | kgU    |

## Product Ratios

|                     |                 |        |
|---------------------|-----------------|--------|
| Feed to Product     | <b>9.2191</b>   | FtoP   |
| Function V(Feed)    | <b>486.8883</b> | V(f)   |
| Function V(Product) | <b>278.0094</b> | V(p)   |
| Function V(Tails)   | <b>595.9017</b> | V(t)   |
| SWU to Product      | <b>6.8711</b>   | SWUtoP |