

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

Feed Assay	<input type="text" value="0.711"/>	w/o
Tails Assay	<input type="text" value="0.25"/>	w/o
Product Assay	<input type="text" value="4.50"/>	w/o
U₃O₈ Cost	<input type="text" value="81.00"/>	\$/lb U ₃ O ₈
Conversion Cost	<input type="text" value="75.00"/>	\$/kgU as UF ₆
UF₆ Cost	<input type="text" value="289.00"/>	\$/kgU as UF ₆
SWU Cost	<input type="text" value="176.00"/>	\$/SWU
UF₆ Conv. Factor	<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	
Cost Basis	<input checked="" type="radio"/> U ₃ O ₈ /Conv <input type="radio"/> UF ₆	

EUP Cost **\$3,851.88**

Optimal Tails Results

Optimal Tails **0.177** w/o
 EUP Cost **\$3,755.77** \$/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 = $(V(p) - V(t)) - F_{toP} * (V(f) - V(t))$

SWU: Separative Work Unit
 EUP: Enriched Uranium Product

Enter Component Quantity

Quantity

Pounds
 kgU
 SWU
 kgU

U₃O₈
 UF₆
 SWU
 EUP

Component Volumes

U ₃ O ₈	0.0	pounds
UF ₆	0.0	kgU
Enrichment	0.0	SWU
EUP	0.0	kgU

Product Ratios

Feed to Product	9.2191	FtoP
Function V(Feed)	486.8883	V(f)
Function V(Product)	278.0094	V(p)
Function V(Tails)	595.9017	V(t)
SWU to Product	6.8711	SWUtoP