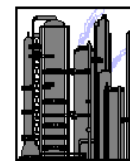


FCCU Yield Example

Product Yields from FCCU												
Feed Information:		Ave BPT °F	Specific Gravity	API Gravity	Watson K Factor	Sulfur Content wt%						
				25.0	12.0	0.500						
Product Distribution:		Conversion =	72.0	vol%						Sulfur Distribution		
			Yields		Standard Densities				Sulfur Distribution			
			vol%	wt%	°API	SpGr	lb/gal	lb/bbl	Product wt%	lb/hr	Recovery wt%	
	Fraction	bbbl/day	lb/hr									
	Feed	25,000										
	Light gases (C2-)											
	Propane (C3)											
	Propylene (C3=)											
	Iso-butane (IC4)											
	n-butane (NC4)											
	Butylenes (C4=)											
	Gasoline (C5+)											
	Light Cycle Oil (LCO)											
	Heavy Cycle Oil (HCO)											
	Coke											
	<i>Total</i>	0	0	0.00%	0.00%						0	
	<i>Cycle Oils</i>	0	0	0.00%	0.00%							
Un-Normalized Yields:												
	Total LPG	0										
	Propane (C3)											
	Propylene (C3=)											
	Iso-butane (IC4)											
	n-butane (NC4)											
	Butylenes (C4=)											
	<i>Total</i>			0.00%								

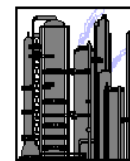




FCCU Yield Example

Product Yields from FCCU												
Feed Information:		Ave BPT	Specific Gravity	API Gravity	Watson K Factor	Sulfur Content	Water density @ 60°F = 8.33718 lb/gal					
		°F				wt%						
		825.4	0.9042	25.0	12.0	0.500						
Product Distribution:												
Conversion =		72.0	vol%									
		Yields				Standard Densities				Sulfur Distribution		
Fraction	bbbl/day	lb/hr	vol%	wt%	API	SpGr	lb/gal	lb/bbl	Product wt%	lb/hr	Recovery wt%	
Feed	25,000				25.0	0.9042	7.538	316.6				
Light gases (C2-)												
Propane (C3)					147.6	0.5070	4.227	177.5				
Propylene (C3=)					140.1	0.5210	4.344	182.4				
Iso-butane (IC4)					119.9	0.5629	4.693	197.1				
n-butane (NC4)					110.8	0.5840	4.869	204.5				
Butylenes (C4=)					103.8	0.6013	5.013	210.6				
Gasoline (C5+)												
Light Cycle Oil (LCO)												
Heavy Cycle Oil (HCO)												
Coke												
<i>Total</i>	0	0	0.00%	0.00%							0	
<i>Cycle Oils</i>	0	0	0.00%	0.00%								
Un-Normalized Yields:												
Total LPG		0										
Propane (C3)												
Propylene (C3=)												
Iso-butane (IC4)												
n-butane (NC4)												
Butylenes (C4=)												
<i>Total</i>				0.00%								

Initialize values from relationships to given data & known pure component data

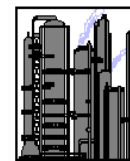


FCCU Yield Example

Product Yields from FCCU											
Feed Information:		Ave BPT	Specific Gravity	API Gravity	Watson K Factor	Sulfur Content	Water density @ 60°F = 8.33718 lb/gal				
		°F				wt%					
		825.4	0.9042	25.0	12.0	0.500					
Product Distribution:											
		Conversion = 72.0 vol%						Sulfur Distribution			
Fraction	bbbl/day	lb/hr	Yields		Standard Densities				Product	Recovery	
			vol%	wt%	API	SpGr	lb/gal	lb/bbl	wt%	lb/hr	wt%
Feed	25,000	329,791	100.0%	100.0%	25.0	0.9042	7.538	316.6	0.50%	1,649	
Light gases (C2-)											
Propane (C3)					147.6	0.5070	4.227	177.5			
Propylene (C3=)					140.1	0.5210	4.344	182.4			
Iso-butane (IC4)					119.9	0.5629	4.693	197.1			
n-butane (NC4)					110.8	0.5840	4.869	204.5			
Butylenes (C4=)					8.8	0.6013	5.013	210.6			
Gasoline (C5+)											
Light Cycle Oil (LCO)											
Heavy Cycle Oil (HCO)											
Coke											
<i>Total</i>	0	0	0.00%	0.00%							0
<i>Cycle Oils</i>	0	0	0.00%	0.00%							
Un-Normalized Yields:											
Total LPG		0									
Propane (C3)											
Propylene (C3=)											
Iso-butane (IC4)											
n-butane (NC4)											
Butylenes (C4=)											
<i>Total</i>				0.00%							

Determine mass feed rate from volumetric feed rate



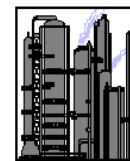


FCCU Yield Example

Product Yields from FCCU												
Feed Information:		Ave BPT	Specific Gravity	API Gravity	Watson K Factor	Sulfur Content	Water density @ 60°F = 8.33718 lb/gal					
		°F				wt%						
		825.4	0.9042	25.0	12.0	0.500						
Product Distribution:												
Conversion =		72.0	vol%									
		Yields				Standard Densities				Sulfur Distribution		
Fraction	bbbl/day	lb/hr	vol%	wt%	°API	SpGr	lb/gal	lb/bbl	Product wt%	lb/hr	Recovery wt%	
Feed	25,000	329,791	100.0%	100.0%	25.0	0.9042	7.538	316.6	0.50%	1,649		
Light gases (C2-)												
Propane (C3)					147.6	0.5070	4.227	177.5				
Propylene (C3=)					140.1	0.5210	4.344	182.4				
Iso-butane (IC4)					119.9	0.5629	4.693	197.1				
n-butane (NC4)					110.8	0.5840	4.869	204.5				
Butylenes (C4=)					103.8	0.6013	5.013	210.6				
Gasoline (C5+)												
Light Cycle Oil (LCO)												
Heavy Cycle Oil (HCO)												
Coke		15,947		4.84%								
<i>Total</i>	0	15,947	0.00%	4.84%							0	
<i>Cycle Oils</i>	0	0	0.00%	0.00%								
Un-Normalized Yields:												
Total LPG		0										
Propane (C3)												
Propylene (C3=)												
Iso-butane (IC4)												
n-butane (NC4)												
Butylenes (C4=)												
<i>Total</i>				0.00%								

Calculate coke yield using Figure 6.18

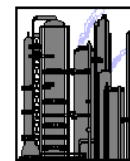




FCCU Yield Example

Product Yields from FCCU												
Feed Information:		Ave BPT	Specific Gravity	API Gravity	Watson K Factor	Sulfur Content	Water density @ 60°F = 8.33718 lb/gal					
		°F				wt%						
		825.4	0.9042	25.0	12.0	0.500						
Product Distribution:												
Conversion =		72.0	vol%									
		Yields				Standard Densities				Sulfur Distribution		
Fraction	bbbl/day	lb/hr	vol%	wt%	°API	SpGr	lb/gal	lb/bbl	Product wt%	lb/hr	Recovery wt%	
Feed	25,000	329,791	100.0%	100.0%	25.0	0.9042	7.538	316.6	0.50%	1,649		
Light gases (C2-)		16,134		4.89%								
Propane (C3)					147.6	0.5070	4.227	177.5				
Propylene (C3=)					140.1	0.5210	4.344	182.4				
Iso-butane (IC4)					119.9	0.5629	4.693	197.1				
n-butane (NC4)					93.8	0.5840	4.869	204.5				
Butylenes (C4=)					103.5	0.6013	5.013	210.6				
Gasoline (C5+)												
Light Cycle Oil (LCO)												
Heavy Cycle Oil (HCO)												
Coke		15,947		4.84%								
<i>Total</i>	0	32,081	0.00%	9.73%								
<i>Cycle Oils</i>	0	0	0.00%	0.00%								
Un-Normalized Yields:												
Total LPG		0										
Propane (C3)												
Propylene (C3=)												
Iso-butane (IC4)												
n-butane (NC4)												
Butylenes (C4=)												
<i>Total</i>				0.00%								

Calculate light gas (C2-) yield using Figure 6.19

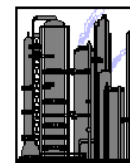


FCCU Yield Example

Product Yields from FCCU												
Feed Information:		Ave BPT	Specific Gravity	API Gravity	Watson K Factor	Sulfur Content	Water density @ 60°F = 8.33718 lb/gal					
		°F				wt%						
		825.4	0.9042	25.0	12.0	0.500						
Product Distribution:												
Conversion =		72.0	vol%									
		Yields			Standard Densities				Sulfur Distribution			
Fraction	bbl/day	lb/hr	vol%	wt%	°API	SpGr	lb/gal	lb/bbl	Product wt%	lb/hr	Recovery wt%	
Feed	25,000	329,791	100.0%	100.0%	25.0	0.9042	7.538	316.6	0.50%	1,649		
Light gases (C2-)		16,134		4.89%								
Propane (C3)	636		2.54%		147.6	0.5070	4.227	177.5				
Propylene (C3=)	1,444		5.78%		140.1	0.5210	4.344	182.4				
Iso-butane (IC4)	1,390		5.56%		119.9	0.5629	4.693	197.1				
n-butane (NC4)	488		1.95%		110.8	0.5840	4.869	204.5				
Butylenes (C4=)	1,893		7.57%		103.8	0.6013	5.013	210.6				
Gasoline (C5+)												
Light Cycle Oil (LCO)												
Heavy Cycle Oil (HCO)												
Coke		15,947		4.84%								
<i>Total</i>	5,851	32,081	23.41%	9.73%							0	
<i>Cycle Oils</i>	0	0	0.00%	0.00%								
Un-Normalized Yields:												
Total LPG	5,851		23.41%									
Propane (C3)			2.92%									
Propylene (C3=)			6.63%									
Iso-butane (IC4)			6.38%									
n-butane (NC4)			2.24%									
Butylenes (C4=)			8.69%									
<i>Total</i>			26.87%									

Calculate the volumetric LPG yields. Unnormalized values from Figs 6-21, & 2-22. Normalize to match the Total LPG yield from Fig. 6-20.



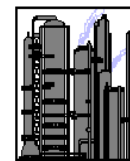


FCCU Yield Example

Product Yields from FCCU												
Feed Information:		Ave BPT	Specific Gravity	API Gravity	Watson K Factor	Sulfur Content wt%	Water density @ 60°F = 8.33718 lb/gal					
		825.4	0.9042	25.0	12.0	0.500						
Product Distribution:												
Conversion =		72.0	vol%									
		Yields				Standard Densities				Sulfur Distribution		
Fraction	bbbl/day	lb/hr	vol%	wt%	°API	SpGr	lb/gal	lb/bbl	Product wt%	lb/hr	Recovery wt%	
Feed	25,000	329,791	100.0%	100.0%	25.0	0.9042	7.538	316.6	0.50%	1,649		
Light gases (C2-)		16,134		4.89%								
Propane (C3)	636	4,704	2.54%	1.43%	147.6	0.5070	4.227	177.5				
Propylene (C3=)	1,444	10,977	5.78%	3.33%	140.1	0.5210	4.344	182.4				
Iso-butane (IC4)	1,390	11,417	5.56%	3.46%	119.9	0.5629	4.693	197.1				
n-butane (NC4)	488	4,162	1.95%	1.26%	110.8	0.5840	4.869	204.5				
Butylenes (C4=)	1,893	16,605	7.57%	5.03%	103.8	0.6013	5.013	210.6				
Gasoline (C5+)												
Light Cycle Oil (LCO)												
Heavy Cycle Oil (HCO)												
Coke		15,947		4.84%								
<i>Total</i>	5,851	79,945	23.41%	24.24%								
<i>Cycle Oils</i>	0	0	0.00%	0.00%								
Un-Normalized Yields:												
Total LPG		5,851	23.41%									
Propane (C3)			2.92%									
Propylene (C3=)			6.63%									
Iso-butane (IC4)			6.38%									
n-butane (NC4)			2.24%									
Butylenes (C4=)			8.69%									
<i>Total</i>			26.87%									

Calculate mass LPG yields using the standard liquid density data



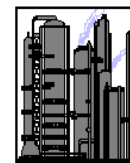


FCCU Yield Example

Product Yields from FCCU												
Feed Information:		Ave BPT	Specific Gravity	API Gravity	Watson K Factor	Sulfur Content	Water density @ 60°F = 8.33718 lb/gal					
		°F				wt%						
		825.4	0.9042	25.0	12.0	0.500						
Product Distribution:												
		Conversion = 72.0 vol%					Sulfur Distribution					
				Yields		Standard Densities			Product Recovery			
Fraction		bbl/day	lb/hr	vol%	wt%	°API	SpGr	lb/gal	lb/bbl	wt%	lb/hr	wt%
Feed		25,000	329,791	100.0%	100.0%	25.0	0.9042	7.538	316.6	0.50%	1,649	
Light gases (C2-)			16,134		4.89%							
Propane (C3)		636	4,704	2.54%	1.43%	147.6	0.5070	4.227	177.5			
Propylene (C3=)		1,444	10,977	5.78%	3.33%	140.1	0.5210	4.344	182.4			
Iso-butane (IC4)		1,390	11,417	5.56%	3.46%	119.9	0.5629	4.693	197.1			
n-butane (NC4)		488	4,162	1.95%	1.26%	110.8	0.5840	4.869	204.5			
Butylenes (C4=)		1,893	16,605	7.57%	5.03%	103.8	0.6013	5.013	210.6			
Gasoline (C5+)		14,311		57.24%								
Light Cycle Oil (LCO)												
Heavy Cycle Oil (HCO)												
Coke			15,947		4.84%							
<i>Total</i>		20,162	79,945	80.65%	24.24%							0
<i>Cycle Oils</i>		0	0	0.00%	0.00%							
Un-Normalized Yields:												
Total LPG		5,851		23.41%								
Propane (C3)				2.92%								
Propylene (C3=)				6.63%								
Iso-butane (IC4)				6.38%								
n-butane (NC4)				2.24%								
Butylenes (C4=)				8.69%								
<i>Total</i>				26.87%								

Determine gasoline volumetric yield



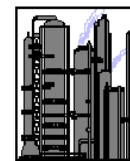


FCCU Yield Example

Product Yields from FCCU												
Feed Information:		Ave BPT	Specific Gravity	API Gravity	Watson K Factor	Sulfur Content wt%	Water density @ 60°F = 8.33718 lb/gal					
		825.4	0.9042	25.0	12.0	0.500						
Product Distribution:												
Conversion =		72.0	vol%									
		Yields				Standard Densities				Sulfur Distribution		
Fraction	bbl/day	lb/hr	vol%	wt%	°API	SpGr	lb/gal	lb/bbl	Product wt%	lb/hr	Recovery wt%	
Feed	25,000	329,791	100.0%	100.0%	25.0	0.9042	7.538	316.6	0.50%	1,649		
Light gases (C2-)		16,134		4.89%								
Propane (C3)	636	4,704	2.54%	1.43%	147.6	0.5070	4.227	177.5				
Propylene (C3=)	1,444	10,977	5.78%	3.33%	140.1	0.5210	4.344	182.4				
Iso-butane (IC4)	1,390	11,417	5.56%	3.46%	119.9	0.5629	4.693	197.1				
n-butane (NC4)	488	4,162	1.95%	1.26%	110.8	0.5840	4.869	204.5				
Butylenes (C4=)	1,893	16,605	7.57%	5.03%	103.8	0.6013	5.018	210.6				
Gasoline (C5+)	14,311	156,021	57.24%	47.31%	57.9	0.7473	6.230	261.7				
Light Cycle Oil (LCO)												
Heavy Cycle Oil (HCO)												
Coke		15,947		4.84%								
<i>Total</i>	20,162	235,966	80.65%	71.55%								
<i>Cycle Oils</i>	0	0	0.00%	0.00%								
Un-Normalized Yields:												
Total LPG		5,851	23.41%									
Propane (C3)			2.92%									
Propylene (C3=)			6.63%									
Iso-butane (IC4)			6.38%									
n-butane (NC4)			2.24%									
Butylenes (C4=)			8.69%									
<i>Total</i>			26.87%									

Determine gravity of gasoline & convert volumes to weight basis



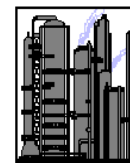


FCCU Yield Example

Product Yields from FCCU												
Feed Information:		Ave BPT	Specific Gravity	API Gravity	Watson K Factor	Sulfur Content wt%	Water density @ 60°F = 8.33718 lb/gal					
		825.4	0.9042	25.0	12.0	0.500						
Product Distribution:												
Conversion =		72.0 vol%										
		Yields			Standard Densities				Sulfur Distribution			
Fraction	bbl/day	lb/hr	vol%	wt%	°API	SpGr	lb/gal	lb/bbl	Product wt%	Recovery lb/hr	wt%	
Feed	25,000	329,791	100.0%	100.0%	25.0	0.9042	7.538	316.6	0.50%	1,649		
Light gases (C2-)		16,134		4.89%								
Propane (C3)	636	4,704	2.54%	1.43%	147.6	0.5070	4.227	177.5				
Propylene (C3=)	1,444	10,977	5.78%	3.33%	140.1	0.5210	4.344	182.4				
Iso-butane (IC4)	1,390	11,417	5.56%	3.46%	119.9	0.5629	4.693	197.1				
n-butane (NC4)	488	4,162	1.95%	1.26%	110.8	0.5840	4.869	204.5				
Butylenes (C4=)	1,893	16,605	7.57%	5.03%	103.8	0.6013	5.013	210.6				
Gasoline (C5+)	14,311	156,021	57.24%	47.31%	57.9	0.7473	6.230	261.7				
Light Cycle Oil (LCO)												
Heavy Cycle Oil (HCO)	1,700		6.80%									
Coke		15,947		4.84%								
<i>Total</i>	21,862	235,966	87.45%	71.55%							0	
<i>Cycle Oils</i>	1,700	0	6.80%	0.00%								
Un-Normalized Yields:												
Total LPG	5,851		23.41%									
Propane (C3)			2.92%									
Propylene (C3=)			6.63%									
Iso-butane (IC4)			6.38%									
n-butane (NC4)			2.24%									
Butylenes (C4=)			8.69%									
<i>Total</i>			26.87%									

Calculate HCO volumetric yield



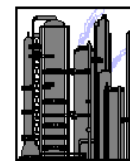


FCCU Yield Example

Product Yields from FCCU												
Feed Information:		Ave BPT	Specific Gravity	API Gravity	Watson K Factor	Sulfur Content wt%	Water density @ 60°F = 8.33718 lb/gal					
		825.4	0.9042	25.0	12.0	0.500						
Product Distribution:												
Conversion =		72.0	vol%									
		Yields				Standard Densities				Sulfur Distribution		
Fraction	bbi/day	lb/hr	vol%	wt%	°API	SpGr	lb/gal	lb/bbl	Product wt%	lb/hr	Recovery wt%	
Feed	25,000	329,791	100.0%	100.0%	25.0	0.9042	7.538	316.6	0.50%	1,649		
Light gases (C2-)		16,134		4.89%								
Propane (C3)	636	4,704	2.54%	1.43%	147.6	0.5070	4.227	177.5				
Propylene (C3=)	1,444	10,977	5.78%	3.33%	140.1	0.5210	4.344	182.4				
Iso-butane (IC4)	1,390	11,417	5.56%	3.46%	119.9	0.5629	4.693	197.1				
n-butane (NC4)	488	4,162	1.95%	1.26%	110.8	0.5840	4.869	204.5				
Butylenes (C4=)	1,893	16,605	7.57%	5.03%	103.8	0.6013	5.013	210.6				
Gasoline (C5+)	14,311	156,021	57.24%	47.31%	57.9	0.7473	6.230	261.7				
Light Cycle Oil (LCO)												
Heavy Cycle Oil (HCO)	1,700	25,857	6.80%	7.84%	4.2	1.0425	8.692	365.0				
Coke		15,947		4.84%								
<i>Total</i>	21,862	261,823	87.45%	79.39%								
<i>Cycle Oils</i>	1,700	25,857	6.80%	7.84%								
Un-Normalized Yields:												
Total LPG	5,851		23.41%									
Propane (C3)			2.92%									
Propylene (C3=)			6.63%									
Iso-butane (IC4)			6.38%									
n-butane (NC4)			2.24%									
Butylenes (C4=)			8.69%									
<i>Total</i>			26.87%									

Estimate gravity of HCO & determine the mass yield (wt% & lb/hr)



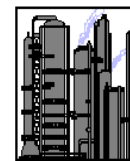


FCCU Yield Example

Product Yields from FCCU											
Feed Information:		Ave BPT	Specific Gravity	API Gravity	Watson K Factor	Sulfur Content wt%	Water density @ 60°F = 8.33718 lb/gal				
		°F									
		825.4	0.9042	25.0	12.0	0.500					
Product Distribution:											
		Conversion =	72.0 vol%								
		Yields				Standard Densities				Sulfur Distribution	
Fraction	bbl/day	lb/hr	vol%	wt%	°API	SpGr	lb/gal	lb/bbl	Product wt%	Recovery lb/hr	wt%
Feed	25,000	329,791	100.0%	100.0%	25.0	0.9042	7.538	316.6	0.50%	1,649	
Light gases (C2-)		16,134		4.89%							
Propane (C3)	636	4,704	2.54%	1.43%	147.6	0.5070	4.227	177.5			
Propylene (C3=)	1,444	10,977	5.78%	3.33%	140.1	0.5210	4.344	182.4			
Iso-butane (IC4)	1,390	11,417	5.56%	3.46%	119.9	0.5629	4.693	197.1			
n-butane (NC4)	488	4,162	1.95%	1.26%	110.8	0.5840	4.869	204.5			
Butylenes (C4=)	1,893	16,605	7.57%	5.03%	103.8	0.6013	5.013	210.6			
Gasoline (C5+)	14,311	156,021	57.24%	47.31%	57.9	0.7473	6.230	261.7			
Light Cycle Oil (LCO)	5,300	67,968	21.20%	20.61%							
Heavy Cycle Oil (HCO)	1,700	25,857	6.80%	7.84%	4.2	1.0425	8.692	365.0			
Coke		15,947		4.84%							
<i>Total</i>	27,162	329,791	108.65%	100.00%							
<i>Cycle Oils</i>	7,000	93,825	28.00%	28.45%							
Un-Normalized Yields:											
Total LPG	5,851		23.41%								
Propane (C3)			2.92%								
Propylene (C3=)			6.63%								
Iso-butane (IC4)			6.38%								
n-butane (NC4)			2.24%								
Butylenes (C4=)			8.69%								
<i>Total</i>			26.87%								

Calculate the LCO volume & weight yields based on difference.

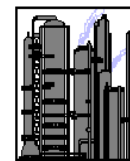




FCCU Yield Example

Product Yields from FCCU											
Feed Information:		Ave BPT	Specific Gravity	API Gravity	Watson K Factor	Sulfur Content wt%	Water density @ 60°F = 8.33718 lb/gal				
		°F									
		825.4	0.9042	25.0	12.0	0.500					
Product Distribution:											
		Conversion =	72.0 vol%								
		Yields				Standard Densities				Sulfur Distribution	
Fraction	bbl/day	lb/hr	vol%	wt%	°API	SpGr	lb/gal	lb/bbl	Product wt%	Recovery lb/hr	wt%
Feed	25,000	329,791	100.0%	100.0%	25.0	0.9042	7.538	316.6	0.50%	1,649	
Light gases (C2-)		16,134		4.89%							
Propane (C3)	636	4,704	2.54%	1.43%	147.6	0.5070	4.227	177.5			
Propylene (C3=)	1,444	10,977	5.78%	3.33%	140.1	0.5210	4.344	182.4			
Iso-butane (IC4)	1,390	11,417	5.56%	3.46%	119.9	0.5629	4.693	197.1			
n-butane (NC4)	488	4,162	1.95%	1.26%	110.8	0.5840	4.869	204.5			
Butylenes (C4=)	1,893	16,605	7.57%	5.03%	103.8	0.6013	5.013	210.6			
Gasoline (C5+)	14,311	156,021	57.24%	47.31%	57.9	0.7473	6.230	261.7			
Light Cycle Oil (LCO)	5,300	67,968	21.20%	20.61%	29.5	0.8790	7.328	307.8			
Heavy Cycle Oil (HCO)	1,700	25,857	6.80%	7.84%	4.2	1.0425	8.692	365.0			
Coke		15,947		4.84%							
Total	27,162	329,791	108.65%	100.00%						0	
Cycle Oils	7,000	93,825	28.00%	28.45%	22.5	0.9187	7.659	321.7			
Un-Normalized Yields:											
Total LPG	5,851		23.41%								
Propane (C3)			2.92%								
Propylene (C3=)			6.63%								
Iso-butane (IC4)			6.38%								
n-butane (NC4)			2.24%								
Butylenes (C4=)			8.69%								
Total			26.87%								

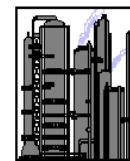
Estimate the densities of the LCO & Total CO based upon the weights & volumes produced.



FCCU Yield Example

Product Yields from FCCU												
Feed Information:		Ave BPT	Specific Gravity	API Gravity	Watson K Factor	Sulfur Content	Water density @ 60°F = 8.33718 lb/gal					
		°F				wt%						
		825.4	0.9042	25.0	12.0	0.500						
Product Distribution:												
		Conversion = 72.0 vol%										
		Yields				Standard Densities				Sulfur Distribution		
Fraction	bbl/day	lb/hr	vol%	wt%	°API	SpGr	lb/gal	lb/bbl	Product wt%	lb/hr	Recovery wt%	
Feed	25,000	329,791	100.0%	100.0%	25.0	0.9042	7.538	316.6	0.50%	1,649		
Light gases (C2-)		16,134		4.89%							24.9%	
Propane (C3)	636	4,704	2.54%	1.43%	147.6	0.5070	4.227	177.5			7.6%	
Propylene (C3=)	1,444	10,977	5.78%	3.33%	140.1	0.5210	4.344	182.4			7.6%	
Iso-butane (IC4)	1,390	11,417	5.56%	3.46%	119.9	0.5629	4.693	197.1			7.6%	
n-butane (NC4)	488	4,162	1.95%	1.26%	110.8	0.5840	4.869	204.5			7.6%	
Butylenes (C4=)	1,893	16,605	7.57%	5.03%	103.8	0.6013	5.013	210.6			7.6%	
Gasoline (C5+)	14,311	156,021	57.24%	47.31%	57.9	0.7473	6.230	261.7			5.1%	
Light Cycle Oil (LCO)	5,300	67,968	21.20%	20.61%	29.5	0.8790	7.328	307.8			15.4%	
Heavy Cycle Oil (HCO)	1,700	25,857	6.80%	7.84%	4.2	1.0425	8.692	365.0			15.4%	
Coke		15,947		4.84%								
<i>Total</i>	27,162	329,791	108.65%	100.00%						0	99.0%	
<i>Cycle Oils</i>	7,000	93,825	28.00%	28.45%	22.5	0.9187	7.650	321.7			30.8%	
Un-Normalized Yields:												
Total LPG	5,851		23.41%								38.2%	
Propane (C3)												
Propylene (C3=)												
Iso-butane (IC4)												
n-butane (NC4)												
Butylenes (C4=)												
<i>Total</i>												

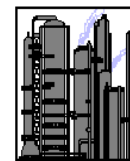
Estimate the recoveries of the sub-fractions from the numbers for the overall fractions (Total LPG & Cycle Oils)



FCCU Yield Example

Product Yields from FCCU												
Feed Information:		Ave BPT °F	Specific Gravity	API Gravity	Watson K Factor	Sulfur Content wt%	Water density @ 60°F = 8.33718 lb/gal					
		825.4	0.9042	25.0	12.0	0.500						
Product Distribution:												
		Conversion = 72.0 vol%					Sulfur Distribution					
	Fraction	bbi/day	lb/hr	Yields		Standard Densities			Product		Recovery	
				vol%	wt%	°API	SpGr	lb/gal	lb/bbl	wt%	lb/hr	wt%
Feed		25,000	329,791	100.0%	100.0%	25.0	0.9042	7.538	316.6	0.50%	1,649	
Light gases (C2-)			16,134		4.89%							24.9%
Propane (C3)		636	4,704	2.54%	1.43%	147.6	0.5070	4.227	177.5			7.6%
Propylene (C3=)		1,444	10,977	5.78%	3.33%	140.1	0.5210	4.344	182.4			7.6%
Iso-butane (IC4)		1,390	11,417	5.56%	3.46%	119.9	0.5629	4.693	197.1			7.6%
n-butane (NC4)		488	4,162	1.95%	1.26%	110.8	0.5840	4.869	204.5			7.6%
Butylenes (C4=)		1,893	16,605	7.57%	5.03%	103.8	0.6013	5.013	210.6			7.6%
Gasoline (C5+)		14,311	156,021	57.24%	47.31%	57.9	0.7473	6.230	261.7			5.1%
Light Cycle Oil (LCO)		5,300	67,968	21.20%	20.61%	29.5	0.8790	7.328	307.8			15.4%
Heavy Cycle Oil (HCO)		1,700	25,857	6.80%	7.84%	4.2	1.0425	8.692	365.0			15.4%
Coke			15,947		4.84%							1.0%
	<i>Total</i>	27,162	329,791	108.65%	100.00%							100.0%
	<i>Cycle Oils</i>	7,000	93,825	28.00%	28.45%	22.5	0.9187	7.659	321.7			30.8%
Un-Normalized Yields:												
	Total LPG	5,851		23.41%								38.2%
	Propane (C3)											
	Propylene (C3=)											
	Iso-butane (IC4)											
	n-butane (NC4)											
	Butylenes (C4=)											
	<i>Total</i>											

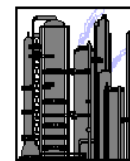
Sulfur to coke by difference.



FCCU Yield Example

Product Yields from FCCU											
Feed Information:		Ave BPT °F	Specific Gravity	API Gravity	Watson K Factor	Sulfur Content wt%	Water density @ 60°F = 8.33718 lb/gal				
		825.4	0.9042	25.0	12.0	0.500					
Product Distribution:											
Conversion =		72.0	vol%								
		Yields			Standard Densities			Sulfur Distribution			
Fraction	bbi/day	lb/hr	vol%	wt%	°API	SpGr	lb/gal	lb/bbl	Product wt%	Recovery lb/hr	wt%
Feed	25,000	329,791	100.0%	100.0%	25.0	0.9042	7.538	316.6	0.50%	1,649	
Light gases (C2-)		16,134		4.89%						410	24.9%
Propane (C3)	636	4,704	2.54%	1.43%	147.6	0.5070	4.227	177.5		126	7.6%
Propylene (C3=)	1,444	10,977	5.78%	3.33%	140.1	0.5210	4.344	182.4		126	7.6%
Iso-butane (IC4)	1,390	11,417	5.56%	3.46%	119.9	0.5629	4.693	197.1		126	7.6%
n-butane (NC4)	488	4,162	1.95%	1.26%	110.8	0.5840	4.869	204.5		126	7.6%
Butylenes (C4=)	1,893	16,605	7.57%	5.03%	103.8	0.6013	5.013	210.6		126	7.6%
Gasoline (C5+)	14,311	156,021	57.24%	47.31%	57.9	0.7473	6.230	261.7		84	5.1%
Light Cycle Oil (LCO)	5,300	67,968	21.20%	20.61%	29.5	0.8790	7.328	307.8		254	15.4%
Heavy Cycle Oil (HCO)	1,700	25,857	6.80%	7.84%	4.2	1.0425	8.692	365.0		254	15.4%
Coke		15,947		4.84%						16	1.0%
<i>Total</i>	27,162	329,791	108.65%	100.00%						1,649	100.0%
<i>Cycle Oils</i>	7,000	93,825	28.00%	28.45%	22.5	0.9187	7.650	321.7		508	30.8%
Un-Normalized Yields:											
Total LPG	5,851		23.41%							631	38.2%
Propane (C3)											
Propylene (C3=)											
Iso-butane (IC4)											
n-butane (NC4)											
Butylenes (C4=)											
<i>Total</i>											

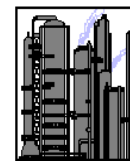
Determine the mass of sulfur in each fraction based on the wt% recovery in each fraction.



FCCU Yield Example

Product Yields from FCCU												
Feed Information:		Ave BPT °F	Specific Gravity	API Gravity	Watson K Factor	Sulfur Content wt%	Water density @ 60°F = 8.33718 lb/gal					
		825.4	0.9042	25.0	12.0	0.500						
Product Distribution:												
		Conversion = 72.0 vol%					Sulfur Distribution					
Fraction	bbl/day	lb/hr	Yields		Standard Densities			Product		Recovery		
			vol%	wt%	°API	SpGr	lb/gal	lb/bbl	wt%	lb/hr	wt%	
Feed	25,000	329,791	100.0%	100.0%	25.0	0.9042	7.538	316.6	0.50%	1,649		
Light gases (C2-)		16,134		4.89%					2.54%	410	24.9%	
Propane (C3)	636	4,704	2.54%	1.43%	147.6	0.5070	4.227	177.5	2.68%	126	7.6%	
Propylene (C3=)	1,444	10,977	5.78%	3.33%	140.1	0.5210	4.344	182.4	1.15%	126	7.6%	
Iso-butane (IC4)	1,390	11,417	5.56%	3.46%	119.9	0.5629	4.693	197.1	1.10%	126	7.6%	
n-butane (NC4)	488	4,162	1.95%	1.26%	110.8	0.5840	4.869	204.5	3.03%	126	7.6%	
Butylenes (C4=)	1,893	16,605	7.57%	5.03%	103.8	0.6013	5.013	210.6	0.76%	126	7.6%	
Gasoline (C5+)	14,311	156,021	57.24%	47.31%	57.9	0.7473	6.230	261.7	0.054%	84	5.1%	
Light Cycle Oil (LCO)	5,300	67,968	21.20%	20.61%	29.5	0.8790	7.328	307.8	0.37%	254	15.4%	
Heavy Cycle Oil (HCO)	1,700	25,857	6.80%	7.84%	4.2	1.0425	8.692	365.0	0.98%	254	15.4%	
Coke		15,947		4.84%					0.10%	16	1.0%	
<i>Total</i>	27,162	329,791	108.65%	100.00%						1,649	100.0%	
<i>Cycle Oils</i>	7,000	93,825	28.00%	28.45%	22.5	0.9187	7.399	321.7		508	30.8%	
Un-Normalized Yields:												
Total LPG	5,851		23.41%							631	38.2%	
Propane (C3)												
Propylene (C3=)												
Iso-butane (IC4)												
n-butane (NC4)												
Butylenes (C4=)												
<i>Total</i>												

Scale the sulfur content of the products as wt%.



FCCU Yield Example

Product Yields from FCCU												
Feed Information:		Ave BPT °F	Specific Gravity	API Gravity	Watson K Factor	Sulfur Content wt%	Water density @ 60°F = 8.33718 lb/gal					
		825.4	0.9042	25.0	12.0	0.500						
Product Distribution:												
		Conversion = 72.0 vol%					Sulfur Distribution					
Fraction	bbl/day	lb/hr	Yields		Standard Densities			Product		Recovery		
			vol%	wt%	°API	SpGr	lb/gal	lb/bbl	wt%	lb/hr	wt%	
Feed	25,000	329,791	100.0%	100.0%	25.0	0.9042	7.538	316.6	0.50%	1,649		
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Gasoline (C5+)	14,311	156,021	57.24%	47.31%	57.9	0.7473	6.230	261.7	0.054%	84	5.1%	
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Heavy Cycle Oil (HCO)	1,700	25,857	6.80%	7.84%	4.2	1.0425	8.692	365.0	0.98%	254	15.4%	
Coke		15,947		4.84%					0.10%	16	1.0%	
<i>Total</i>	27,162	329,791	108.65%	100.00%						1,649	100.0%	
<i>Cycle Oils</i>	7,000	93,825	28.00%	28.45%	22.5	0.9187	7.659	321.7		508	30.8%	
Un-Normalized Yields:												
Total LPG	5,851		23.41%							631	38.2%	
Propane (C3)			2.92%									
Propylene (C3=)			6.63%									
Iso-butane (IC4)			6.38%									
n-butane (NC4)			2.24%									
Butylenes (C4=)			8.69%									
<i>Total</i>			26.87%									