

2.	Work in process, February 1 .....	13,000 kilograms
	Units started during February .....	1,500 kilograms
	Units completed during February .....	9,200 kilograms
	Work in process, February 28 .....	?
3.	Work in process, January 1 .....	100,000 gallons
	Units started during the year .....	850,000 gallons
	Units completed during the year .....	?
	Work in process, December 31 .....	200,000 gallons



■ **Exercise 4-16**  
Process Costing; Use of  
Internet  
(LO 4-1)



■ **Exercise 4-17**  
Equivalent Units;  
Weighted-Average  
(LO 4-1, 4-3)

Use the Internet to access the website for Weyerhaeuser ([www.weyerhaeuser.com](http://www.weyerhaeuser.com)), International Paper ([www.internationalpaper.com](http://www.internationalpaper.com)), or Boise Cascade ([www.boisecascade.com](http://www.boisecascade.com)).

**Required:** Skim over the information presented on the website about the company's products and operations. Then discuss why process costing is an appropriate product-costing method for this company.

Rainbow Glass Company manufactures decorative glass products. The firm employs a process-costing system for its manufacturing operations. All direct materials are added at the beginning of the process, and conversion costs are incurred uniformly throughout the process. The company's production schedule for October follows.

	Units
Work in process on October 1 (60% complete as to conversion) .....	1,000
Units started during October .....	5,000
Total units to account for .....	<u>6,000</u>
Units from beginning work in process, which were completed and transferred out during October .....	1,000
Units started and completed during October .....	3,000
Work in process on October 31 (20% complete as to conversion) .....	<u>2,000</u>
Total units accounted for .....	<u>6,000</u>

**Required:** Calculate each of the following amounts using weighted-average process costing.

- Equivalent units of direct material during October.
- Equivalent units of conversion activity during October.

(CMA, adapted)

■ **Exercise 4-18**  
Equivalent Units;  
Weighted-Average  
(LO 4-1, 4-3)

Terra Energy Company refines a variety of petrochemical products. The following data are from the firm's Lodi plant.

Work in process, November 1 .....	2,000,000 gallons
Direct material .....	100% complete
Conversion .....	25% complete
Units started in process during November .....	950,000 gallons
Work in process, November 30 .....	240,000 gallons
Direct material .....	100% complete
Conversion .....	80% complete

**Required:** Compute the equivalent units of direct material and conversion for the month of November. Use the weighted-average method of process costing.

**Required:**

1. Complete each of the following process-costing steps using the weighted-average method:
  - a. Calculation of equivalent units.
  - b. Computation of unit costs.
  - c. Analysis of total costs.
2. Prepare a journal entry to record the transfer of the cost of goods completed and transferred out during May.



Moravia Company processes and packages cream cheese. The following data have been compiled for the month of April. Conversion activity occurs uniformly throughout the production process.

Work in process, April 1—10,000 units:		
Direct material: 100% complete, cost of .....		\$ 22,000
Conversion: 20% complete, cost of .....		4,500
Balance in work in process, April 1 .....		<u>\$ 26,500</u>
Units started during April .....		100,000
Units completed during April and transferred out to finished-goods inventory .....		80,000
Work in process, April 30:		
Direct material: 100% complete		
Conversion: 33 1/3% complete		
Costs incurred during April:		
Direct material .....		<u>\$198,000</u>
Conversion costs:		
Direct labor .....		\$ 52,800
Applied manufacturing overhead .....		105,600
Total conversion costs .....		<u>\$158,400</u>

**Required:** Prepare schedules to accomplish each of the following process-costing steps for the month of April. Use the weighted-average method of process costing.

1. Analysis of physical flow of units.
2. Calculation of equivalent units.
3. Computation of unit costs.
4. Analysis of total costs.
5. **Build a spreadsheet:** Construct an Excel spreadsheet to solve all of the preceding requirements. Show how the solution will change if the following data change: the April 1 work-in-process costs were \$66,000 for direct material and \$18,000 for conversion.

Albany Company accumulates costs for its product using process costing. Direct material is added at the beginning of the production process, and conversion activity occurs uniformly throughout the process.

**Production Report  
For August 20x1**

	Physical Units	Percentage of Completion with Respect to Conversion	Equivalent Units	
			Direct Material	Conversion
Work in process, August 1 .....	40,000	80%		
Units started during August .....	80,000			
Total units to account for .....	<u>120,000</u>			
Units completed and transferred out during August .....	100,000		100,000	100,000
Work in process, August 31 .....	<u>20,000</u>	30%	20,000	6,000
Total units accounted for .....	<u>120,000</u>			

(continued)

**Problem 4-29**  
Straightforward Weighted-Average Process Costing; Step-by-Step Approach (LO 4-3, 4-4, 4-5)

2. Equivalent units, direct material: 110,000

**Problem 4-30**  
Partial Production Report; Journal Entries; Weighted-Average Method (LO 4-2, 4-3, 4-4, 4-5)

2. Cost per equivalent unit, total: \$11.43
5. Work-in-Process Inventory (credit): \$1,143,000