Valuation of Inventory: Weighted Average

The weighted average method is used to assign the average cost of production to a product. Weighted average costing is commonly used in situations where:

Inventory items are so intermingled that it is impossible to assign a specific cost to an individual unit.

The accounting system is not sufficiently sophisticated to track FIFO or LIFO inventory layers.

Inventory items are so commoditized (i.e., identical to each other) that there is no way to assign a cost to an individual unit.

When using the weighted average method, divide the cost of goods available for sale by the number of units available for sale, which yields the weighted-average cost per unit. In this calculation, the cost of goods available for sale is the sum of beginning inventory and net purchases. You then use this weighted-average figure to assign a cost to both ending inventory and the cost of goods sold.

The net result of using weighted average costing is that the recorded amount of inventory on hand represents a value somewhere between the oldest and newest units purchased into stock. Similarly, the cost of goods sold will reflect a cost somewhere between that of the oldest and newest units that were sold during the period.

The weighted average method is allowed under both generally accepted accounting principles and international financial reporting standards.

Advantage of the weighted average method

The advantages of the weighted average cost are as follows:

1. The weighted average method reduces the effect of unusual high and low materials prices.
2. The weighted average method is practical and appropriate to the cost of the cost of materials used in production.
3. It is useful for management in analyzing operating results.
4. This method is simple to apply if material receipts are not multiple.

Disadvantages of the weighted average method

The main drawbacks of the weighted cost method are:

1. The materials used for production may not be loaded at the current price.
2. The cost charged on production is not the actual prices.
3. If receipts are numerous, many accounts will be required.

Formula of Calculation of Weighted Average Cost

$$\frac{\text{Cost of units already in hand + Cost of newly purchased units}}{\text{Units already in hand + Newly purchased unit}}$$

Or

$$\text{Weighted Average Unit Cost} = \frac{\text{Total Cost of the Item}}{\text{Total Units of the Item}}$$

Example

April 01: Inventories on hand: 50 units at the rate of $2 and 100 units at the rate of $4.50

April 05: Purchased 100 units at a rate of $1.80

April 06: 10 units of the inventories purchased on 5th April at the rate of $1.80 are returned to supplier

April 10: 80 units were issued to factory

April 15: 50 units were issued to factory

April 20: 20 units were purchased at the rate of $1.50

April 25: 70 units were issued to factory

April 30: 50 units purchased at $1.70

Determine the cost of inventory on 30th April, under weighted average method of costing.

Date	Receipts			Issues			Balance		
	Quantity	Rate	Amount	Quantity	Rate	Amount	Quantity	Rate	Amount
2006		$	$		$	$		$	$
April 1	Balance						150	1.66667	430.00
April 5	100.00	1.80	180.00				250	1.72	430.00
April 06	10	1.72	72.20				240	172	412.80
April 10				80	1.72	137.60	160	1.272	275.20
April 15				50	1.72	86.00	110	1.72	189.20
April 20	20	1.50	30.00				130	1.68615	219.20
April 25				70	1.68615	118.0305	60	1.68615	101.169
April 30	50	1.70	85.00				110	1.69224	186.1464
April 30				10	1.69224	16.92445	120	1.69224	203.0928