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IAS® Standard 2 Inventories



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IAS® Standard 2 Inventories

SCOPE AND KEY DEFINITIONS

IAS® Standard 2 Inventories prescribes the rules for the inventories, establishes methods for the determination of the cost of inventories and its subsequent recognition as an expense, as well as presents the cost formulas that are used to assign costs to inventories.

As shown in Figure 1, IAS 2 applies to all types of inventories, except financial instruments, biological assets related to the agricultural activity and agricultural produce and inventories held by commodity broker-traders.

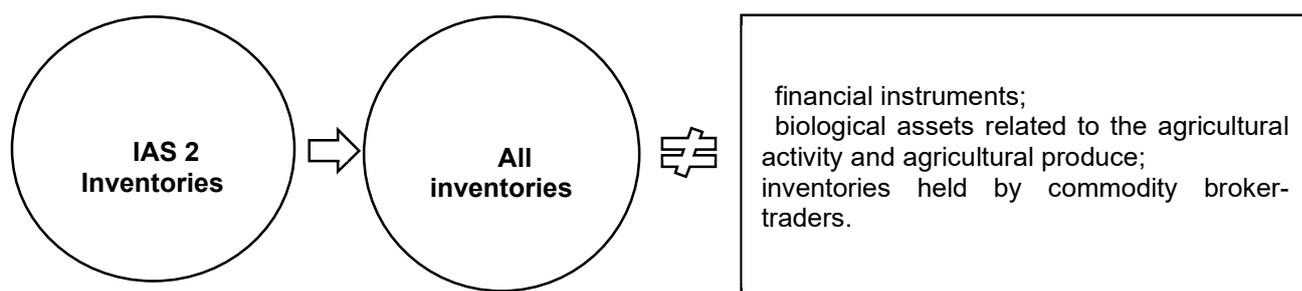


Figure 1. Scope of implementation of IAS 2

The most important IAS 2 definitions are listed in Table No. 1.

Table 1. Key Definitions (IAS 2.6-8)

Definition	Explanation
Inventories	The assets which are: <ul style="list-style-type: none"> ✓ held for sale and will be sold in the ordinary course of business; ✓ used in the production process to sell the manufactured products; ✓ raw materials or supplies to be sold to customers who use them in further production processes.
Cost of inventories	All the aggregated purchase, conversion and other costs incurred in acquiring and delivering inventories to their present location and condition.
Net realisable value	The price determined on the basis of the normal conditions of sale of the business, from which the estimated costs of completion and necessary to make selling costs are eliminated.
Fair value	The price that can be obtained from selling inventories or paying for a liability upon receipt of such inventories in an orderly transaction between market participants at the measurement date.

Inventories may include goods for resale, raw materials or supplies, finished goods or work in progress, as well as various acquisitions that will be used in the production process. Expenses that do not give rise to inventories are accounted for in accordance with other standards.

FUNDAMENTAL ISSUE: RECOGNITION

The stages of inventory recognition include their movement, which is shown in Figure 2.

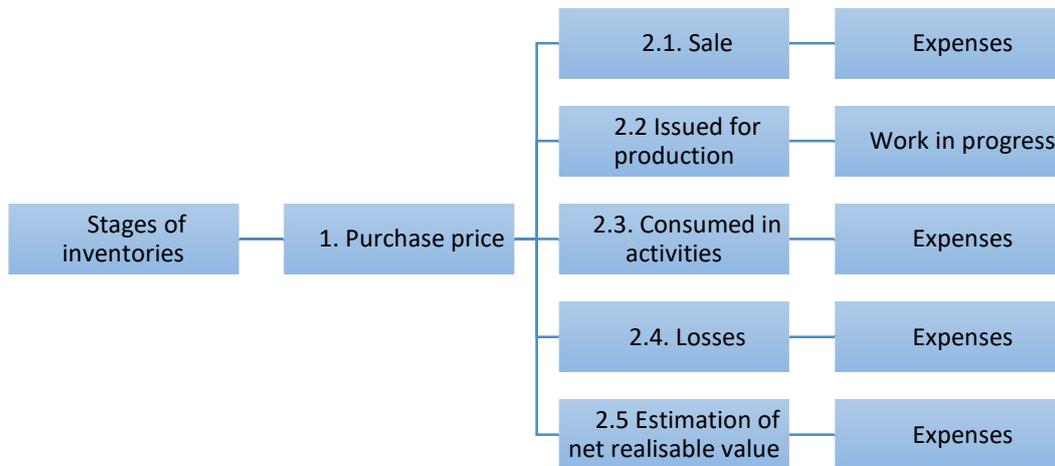


Figure 2. Stages of inventory

As presented in Fig. 2, when inventories are sold, their value is recognized as an expense at the same moment, when the related revenue is recognized. The amount of the write-down to net realisable value and any other losses on inventories are recognized as an expense when this write-down or loss occurs.

The amount of any reversal of any write-down of inventories, arising from an increase in net realisable value, shall be recognised as a reduction in the value of inventories recognised as an expense in the period in which the reversal occurs. If inventories are used in the production of other assets, such as real estate, they are recorded in the accounts of other assets. In that case, they are recognized as an expense in accordance with the rules applicable to that asset, for example, in calculating depreciation.

MEASUREMENT

Different methods of inventories measurement are used, but the basics rules applies to all entities are the same. Presenting the inventories in balance sheet entities must follow the basic rule for measuring inventories. Figure 3 shows the basic rule for measuring inventory.

Inventories shall be measured at the cost value or net realisable value and presented at the lower of cost and net realisable value in balance sheet	
<p>An example if the cost is lower.</p> <p><i>The cost of good A is CU100, and the estimated realisable value of good A is CU120. In the balance sheet, goods A will be presented for CU100.</i></p>	<p>An example if net realisable value is lower.</p> <p><i>The cost of good A is CU100, and the estimated realisable value of good A is CU80. In the balance sheet, goods A will be presented for CU80.</i></p>

Figure 3. Measurement rule of inventories

It is important to know how purchase costs, conversion costs, or other costs are estimated in cases of purchasing and recording inventory in accounts.

Costs of purchase. The cost of inventories consists of purchase price, import duties and other taxes (other than those that are subsequently recoverable, for example, value added tax), as well as transportation, insurance and other costs directly attributable to the acquisition of inventories. Trade discounts, rebates, and other similar items reduce the costs of purchase (see Fig. 4).

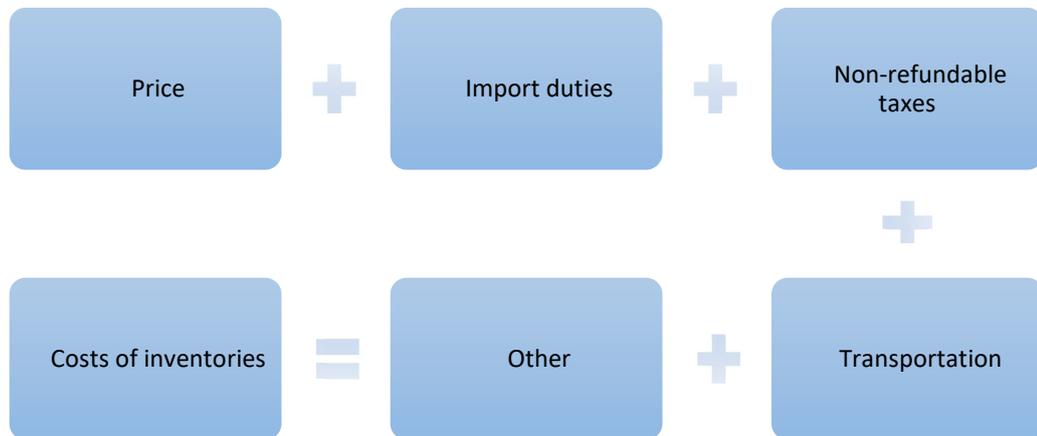


Figure 4. Costs of purchase

Costs of conversion. The costs of conversion of inventories include all costs directly related to the production process, such as direct costs, fixed and variable production overheads (see Fig. 5).

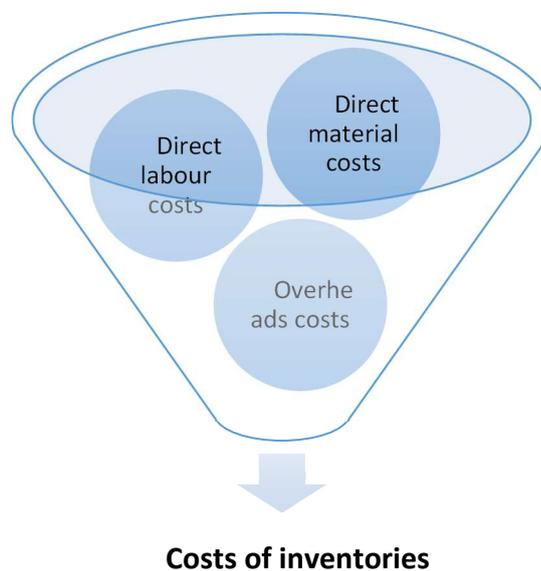


Figure 5. Costs of conversion

Costs directly attributable to production units include the cost of materials, direct labour costs and others that are directly related to the units of production. Fixed production overheads are indirect production costs that remain relatively constant regardless of the volume of production, such as depreciation of assets used in the production process, production process administrative costs and others. Variable production overheads are those indirect costs of production that vary directly, or nearly directly, with the volume of production, such as indirect materials and indirect labour. If more than one product is produced at the same time and the costs of conversion of each product cannot be determined separately, they shall be allocated to the products in a rational and consistent basis.

Other costs. Other costs are included in the cost of inventories only to the extent that they are recognized as direct and necessary to create inventories. For example, this could be the cost of developing products for specific customers. Examples of costs that are not included in the cost of inventories and are recognized as an expense in the period in which they are incurred are:

- ✓ lost non-production material, such as theft;
- ✓ general administrative expenses, such as financial audit expense;
- ✓ selling expense;
- ✓ and others.

An example is given in Table 2. Example, a entity buys only raw material A and produces product B from it, which it then resells.

Table 2. Costs of inventories

Expenses	Value, CU	Costs of inventory	Not included in the cost
Expenditure on raw material A according to the suppliers' invoice (VAT excluded)	1,000	v	
VAT is indicated on the invoice	200		v
Transportation costs	100	v	
Wages and salaries of production workers	100	v	
Depreciation of production equipment	50	v	
Seller's commission	20		v
Accountant's salary	100		v
After calculating the cost of production, we record product value in accounts:			
Costs of product = CU1,000 + CU100 + CU100 + CU50 = CU1,250			

Cost of agricultural produce harvested from biological assets. Inventories classified as agriculture production or biological assets has some specificity. Therefore, agriculture inventories measurement guidelines are described in IAS Standard 41 Agriculture. One of the most important aspects of agricultural production harvested from its biological assets are that they are measured at their fair value.

Techniques for the measurement of cost. Entities may choose different practices for measuring inventory. The following methods are distinguished: the standard cost method and the retail method (see Table 3).

Table 3. Techniques for the measurement of cost

Techniques	Explanation
The standard cost method	The standard cost approach takes into account the normal level of materials, other inventories, labour, efficiency and capacity. They shall be reviewed regularly and, if necessary, revised in the light of the existing conditions.
The retail method	Usually, the retail method results show the approximate cost. It is commonly used to estimate large quantities of inventories that change rapidly and have similar margins. This method is chosen when it is not possible to apply other cost methods. Applying retail methods, the cost of inventories is reduced in proportion to their sales value. The average percentage for each retail division is often used.

Cost formulas. The cost method requires the use of inventory costs formulas. Ways of calculating the cost of inventories are presented in Figure 6.

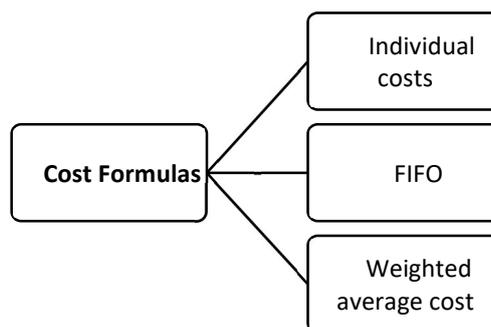


Figure 6. Cost formulas

Identification of individual costs is used for items that are not ordinarily interchangeable and means that specific costs are allocated to specific items of inventory. However, this way is not appropriate for items that are ordinarily interchangeable.

It is better to use the FIFO method for such inventories. When using the FIFO method, it is assumed that the inventory that is produced or acquired first will be the first to be retired. That is, the inventory remaining in stock consists of the last batches purchased or produced and is valued at the last purchase or production price.

For inventories that are mixed and cannot be identified by the date of acquisition, the weighted average cost formula is best in practice. When applying the weighted average approach, the cost of each item is determined from the weighted average of the cost of similar items at the beginning of a period and the cost of similar items purchased or produced during the period. The average may be calculated on a periodic basis, or as each additional shipment is received, depending upon the circumstances of the entity.

Net realisable value. Net realisable value is the estimated selling price of inventories in the ordinary course of business, the necessary less costs to bring the inventories to completion and the estimated necessary costs to sell. This approach is dictated by the need to provide reliable information: inventories should not be carried in excess of amounts expected to be realized from their sale or use.

At net realisable value, inventories are usually valued individually. Sometimes, due to the abundance of inventories, it is difficult to evaluate each inventory individually, so it may be appropriate to group inventories according to their similar nature or related items. An example is given in Table 4. Example, the entity has two types of inventories – A and B. These inventories are different, so we must evaluate each one individually, depending on which price is lower. The minimum price for product A is its net realisable value – CU900, for product B – the costs of the purchase is CU1500.

Table 4. Measurement of inventories

Inventory	Costs of purchase, CU	Net realisable value, CU	Lowest value, CU
A	1000	900	900
B	1500	1600	1500
Total	2500	2500	2400

Estimation of realisable value must be based on reliable evidence that the inventories can be realized at estimated the amount. Then inventories are held to use for production and entities expected to sell finished products at cost or higher price, then inventories are not written down below the cost (of net realizable value is low). Table 5 presents several atypical cases in determining the net realisable value.

Table 5. Examples of net realisable value setting

Net realisable value setting on	Examples
Information of post – reporting events	It is known that in December 20x1, the net realisable value of inventories is CU1,000. But due to the economic crisis, the inventories net realisable value decreased to CU800 in January 20x1. Therefore, it is appropriate to evaluate the information in this post-reporting event to determine the net realizable value of inventories for 20x1 financial statements.
Information of contracts	Entity X provides fence installation services. It has entered into an agreement with customer A, under which, the fences of metal of 1,000 sq.m. will be sold for CU10,000. Entity X has purchased these metal products and holds them exclusively for this customer A.

The net realizable value is remeasured in every new period. Therefore, if circumstances have changed and it has thus resulted in inventories being written down below cost in the previous period and the net realizable value has increased as a result of the changed economic circumstances, the previous write-down is reversed. This may

be the case when inventories were carried at net realizable value, because their selling price decreased in the previous period and the selling price of inventories increased in the subsequent period. An example is given in Figure 7.

Situation	Date	Record
Entity purchased inventory A for CU1,000 on 15 May 20x1.	15-05-20x1	<i>Purchase</i> Dr. Inventories CU1,000 Cr. Cash CU1,000
The financial statements for 31 December 20x1 are prepared. It is known that the inventories have not been sold or used. The estimated net realisable value of inventories is CU800. Therefore, the entity recorded a devaluation of inventories value at CU200. The value of inventories presented in the financial statement is CU800.	31-12-20x1	<i>Devaluation</i> Dr. Expenses CU200 Cr. Inventories CU200
Due to the scarcity of raw materials, the net realizable value in 20x2 rose to CU1,500 for inventories. Therefore, the previous devaluation is reversed. The value of inventories again remains at the cost of CU1,000.	31-12-20x2	<i>Reversion</i> Dr. Inventories CU200 Cr. Expenses CU200

Figure 7. Example of written down to net realisable value

DISCLOSURES

Information about inventories should be disclosed to the user of the financial statements. Figure 8 provides what information about inventories must be disclosed in the financial statements of the entity.

Financial statements	✓ information about the accounting policies of inventories – what measuring is used, what cost formula is applied;
	✓ the total carrying amount of inventories and the carrying amount in classifications appropriate to the entity;
	✓ the carrying amount of inventories which are estimated at fair value less costs to sell;
	✓ the amount of inventories recognised as an expenses during the period;

notes	✓	the amount of any write-down of inventories recognised as expenses during the period;
	✓	the amount of any reversal of any write-down that is recognised as a reduction in the amount of inventories recognised as an expense in the period;
	✓	the circumstances or events that led to the reversal of a write-down of inventories;
	✓	the carrying amount of inventories pledged as security for liabilities.

Figure 8. Inventory disclosure

The entity may choose how to classify inventories in the disclosure. However, the common classifications of inventories are shown in Figure 9.



Figure 9. Classifications of inventories

When disclosing information about inventories, an entity may disclose the amount of inventories recognized as an expense during the period. Often in commercial or manufacturing entities, this is included in the cost of sales. Some entities that use a different profit (loss) statement format provide a classification according to the nature of the expense or the inventories have been allocated to raw materials and consumables or other expenses.

EXAMPLES

Example No. 1

The following is an example of how to calculate the cost of sales applying two ways calculations: FIFO and weighted average cost.

FIFO cost

Operation	Quantity	Price, CU	Formula	Sum, CU
Purchase	10	15		150.00
Purchase	25	19		475.00
Cost of sales	18	x	10 units x CU15 + 8 units x CU19	302.00
Remained in stock	17		17 units x CU19	323.00

Weighted average cost

Operation	Quantity	Price, CU	Formula	Sum, CU
Purchase	10	15		150.00
Purchase	25	19		475.00
Calculation of the average			$(10 \text{ units} \times \text{CU}15 + 25 \text{ units} \times \text{CU}19) / (10 \text{ unit} + 25 \text{ unit})$	17.857
Cost of sales	18	x	18 units x CU17.857	321.43
Remained in stock	17		17 units x CU17.857	303.57

Example No. 2

The entity uses the perpetual inventory system for inventories and the FIFO valuation method. It is known that on April 5, the entity purchased 10 units of A goods for CU10 per unit and B goods 20 units for CU6 per unit, the additional transportation costs for all goods amounted to CU200. On May 6, it purchased 20 units of A goods for CU7 per unit, and transport costs amounted to CU80. On May 15, the entity sold 12 units A goods and 5 units B goods to the customer for a total of CU400.

How is the cost of inventory determined? Transportation costs in this case increase the cost of goods and given that the costs are common to several types of goods (A and B), they need to be allocated.

Purchase on April 5

Goods	Units	Price, CU	Total, CU	Proportion of goods value, %	Allocation of transportation, CU	Total costs of goods, CU	Costs per unit, CU
A	10	10	100	45.45	$200 \times 45.45\% = 90.90$	$100 + 90.90 = 190.90$	$190.90 / 10 = 19.090$
B	20	6	120	54.55	$200 \times 54.55\% = 109.10$	$120 + 109.10 = 229.10$	$229.10 / 20 = 11.455$
Total:			220	100.00	200.00	420.00	-

Purchase on May 6

Goods	Units	Price, CU	Total, CU	Proportion of goods value, %	Allocation of transportation, CU	Total costs of goods, CU	Costs per unit, CU
A	20	7	140	100.00	80.00	$140 + 80 = 220.00$	$220 / 20 =$

May 15, Sales	Dr. Receivables CU400.00 Cr. Revenue CU400.00 Dr. Costs of Sales (Expenses) CU270.17 Cr. Inventories CU270.17
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The inventories balance is calculated from the entries in the general journal and then checked with the goods cards.

Dr.	Inventories	Cr.	Goods	Balances from cards, CU
	Beginning: CU0.00		A	198.00
	April 5: CU420.00		B	171.83
	May 6: CU220.00		Total:	369.83
		May 15: CU270.17		
	End: CU369.83			