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Current Status of Accounting for Drug Production Processes in Uzbekistan and Directions for Improvement

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Abstract: This article examines the current state of accounting for drug production processes in the Republic of Uzbekistan and identifies key directions for its improvement in the context of modern economic reforms and the rapid development of the pharmaceutical industry. The relevance of the research is обусловлена the growing importance of ensuring transparency, efficiency, and reliability in accounting systems, particularly in strategically significant sectors such as pharmaceutical manufacturing, which directly impacts public health and national economic security.

The study analyzes the existing regulatory framework governing accounting practices in pharmaceutical enterprises, including national accounting standards and their alignment with international financial reporting standards (IFRS). Special attention is paid to the specific features of cost accounting in drug production, such as the complexity of technological processes, strict quality control requirements, multi-stage production cycles, and the necessity of tracking raw materials, semi-finished, and finished products. The paper highlights the challenges associated with allocating indirect costs, accounting for losses, waste, and by-products, as well as managing inventory in compliance with pharmaceutical standards.

The article proposes a set of recommendations aimed at improving accounting practices in drug production processes. These include the development of industry-specific accounting guidelines, внедрение современных цифровых решений, harmonization with international standards, and strengthening internal control mechanisms. Furthermore, the importance of professional training and continuous development of accounting personnel is emphasized as a critical factor for successful reform implementation.

Keywords: *drug industry enterprises, pharmaceutical products, drugs, main production, auxiliary production, primary packaging process of drugs, secondary packaging process of drugs, accounting of drug production processes.*

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1. Introduction

In a newly adopted regulatory document of the Republic of Uzbekistan dated February 16, 2026, "On Additional Measures to Consistently Continue and Advance Reforms to a New Level within the Priority Directions of the Country's Development until 2030," pharmaceutical manufacturing activity in the country has been recognized as a "driver" sector of industry, and important tasks have been set, including "covering 70% of the demand for medicines through domestic producers." [1] Thus, it can be stated that developing local products, including domestic pharmaceutical products, through the development of the manufacturing sector at enterprises is currently the most fundamental direction for developing the country's industry. An analysis of these indicators shows that,

as a result of the attention given by the head of state, the number of pharmaceutical manufacturing enterprises within the country and the corresponding volume of pharmaceutical products are increasing at a rapid pace year by year. This, in turn, means that organizing pharmaceutical production processes carried out by enterprises in accordance with international practices, establishing modern product manufacturing, achieving management effectiveness through controlling and managing these processes, and further improving the accounting of production processes for products such as pharmaceuticals are among the most fundamental tasks facing the sector today.[2]

Various definitions of an economic nature regarding the accounting of costs related to main and auxiliary production processes are given in various sources. In particular, K.B. Urazov defined main production expenses as "expenses of the production workshops that directly carry out the main technological processes of production." Definitions of main production processes and their associated costs may vary depending on the scope of activity of enterprises. For example, in motor transport enterprises, "expenses incurred for work performed (services rendered) on cargo or passenger transport" fall under the category of main production expenses.[3]

Sh. Onorboev has studied the specific features of production processes at chemical industry enterprises operating in our country, noting that "at chemical enterprises, the production of each product consists of unique chemical processes, which in turn means that the volume of production costs may differ for different products." [4]

B.F. Boronov described production costs as "expenses spent on the main production departments of products and constituting the cost of each product manufactured in these departments." This definition shows that not one but several main production units operate at the main production stage at enterprises.[5]

Sh.A. Pardaeva has conducted scientific research on maintaining strategic management accounting for costs at enterprises in various sectors, and has developed scientifically significant theoretical proposals for improving management accounting at enterprises. The researcher concluded that "the introduction of modern and new methods in strategic management accounting of costs must, first and foremost, be directly and closely linked to the concept of cost reduction, i.e., resource conservation." [6]

M.A. Nabiyeu describes finished product manufacturing costs as "the monetary expression of production reserves spent in the production process and the direct labor and other indirect resources spent on processing them, as a result of which the cost of the product is formed." [7]

2. Materials And Methods

Research methods such as scientific abstraction, economic analysis, monographic observation, comparison, induction, and deduction were employed in the research conducted on the current status and directions for improvement of accounting for drug production processes.[8]

3. Results and Discussion

At pharmaceutical manufacturing enterprises, the main production processes are carried out in three stages. The first function of the main production department is carried out in the drug preparation workshop, where raw materials and substances — the most essential raw material for pharmaceutical production — are transferred from the central warehouse to the main production process.

Since pharmaceutical products are subject to packaging, after being prepared in the manufacturing workshops, they are transferred to the primary packaging workshop for

the primary packaging process. The main function of this workshop is to package pharmaceutical products using auxiliary products manufactured at the enterprise itself. Pharmaceutical products are classified as immediate packaging (primary packaging) and outer packaging (secondary packaging). Immediate packaging (primary packaging) refers to the container (package) that wraps or is in direct contact with the pharmaceutical product. Outer packaging (secondary packaging) is the external packaging in which pharmaceutical products with immediate packaging are placed.[9]

At enterprises, after the primary packaging process is completed, the pharmaceutical products are transferred to the quarantine storage warehouse. Only after the quarantine storage warehouse processes are complete are the primary packaging pharmaceutical products recognized as finished goods and transferred to the finished pharmaceutical products warehouse for sale. Secondary pharmaceutical products, on the other hand, are recognized as semi-finished products in this manufacturing workshop and transferred for further processing at the next stage.[10]

Semi-finished products produced as a result of pharmaceutical production processes — i.e., secondary pharmaceutical products — are re-packaged in the secondary packaging workshop. After the processes in this workshop are completed, unlike primary pharmaceutical products, secondary pharmaceutical products are not transferred to the quarantine storage warehouse for quarantine storage; instead, only after this process are these products transferred to the finished pharmaceutical products warehouse as finished goods.[11]

The results of the scientific research also required examining the accounting entries made in the main production sector at pharmaceutical manufacturing enterprises. Today, the main production cost accounting entries at pharmaceutical manufacturing enterprises are reflected as follows (see Table 1)[12]

Table 1.

Business Operations on Main Production Processes of Pharmaceutical Products and Their Accounting Entries[13]

(compiled by the author based on data from pharmaceutical manufacturing enterprises)

No.	Description of Operation	Debit	Credit	Amount (UZS)
Business operations related to the Drug Preparation Workshop				
1	"Sodium chloride" substance was transferred to the main production workshop for manufacturing "Megasol 100 ml" solution	2010	1010	187,366,440
2	Preform was transferred to the main production workshop for manufacturing "Megasol 100 ml" solution	2010	2110	14,640,450
3	Euro-cap was transferred to the main production workshop for manufacturing "Megasol 100 ml" solution	2010	2110	18,816,140
4	Hook was transferred to the main production workshop for manufacturing "Megasol 100 ml" solution	2010	2110	783,700

5	Wages were accrued for employees of the "Megasol 100 ml" solution manufacturing process	2010	6710	41,057,270
6	Social tax was accrued on wages of employees in the "Megasol 100 ml" solution manufacturing process	2010	6520	4,926,870
7	General production expenses were allocated to the "Megasol 100 ml" solution manufacturing process	2010	2510	27,612,200
8	Depreciation was charged on "XGF(Q) 30/24" model equipment for sterilizing, filling, and automatically capping bottles, used in the "Megasol 100 ml" solution manufacturing process	2010	0230	7,278,290
9	Other expenses were charged for the "Megasol 100 ml" solution manufacturing process	2010	0220, 1040, 1090, 6990	4,256,220
Business operations related to the Primary Packaging Workshop				
10	Labels for primary packaging were transferred for the primary packaging of "Megasol 100 ml" solution	2010	1010	1,975,950
11	Corrugated boxes were transferred for the primary packaging of "Megasol 100 ml" solution	2010	1010	6,267,710
12	Wages were accrued for employees of the primary packaging process for "Megasol 100 ml" solution	2010	6710	1,181,100
13	Social tax was accrued on wages of employees in the primary packaging process for "Megasol 100 ml" solution	2010	6520	141,730
14	General production expenses were allocated to the primary manufacturing process for "Megasol 100 ml" solution	2010	2510	794,320
15	Depreciation was charged on automatic bottle labeling equipment used in the primary manufacturing process for "Megasol 100 ml" solution	2010	0230	209,370
16	Other expenses were charged for the primary manufacturing process for "Megasol 100 ml" solution	2010	0220, 1040, 1090, 6990	122,440
Business operations related to the Secondary Packaging Workshop				
17	Pencil-type cardboard was transferred for the secondary packaging of "Megasol 100 ml" solution	2010	1010	55,527,290
18	Digital marking barcodes were transferred for the secondary packaging of "Megasol 100 ml" solution	2010	2110	6,769,130
19	Wages were accrued for employees of the secondary packaging process for "Megasol 100 ml" solution	2010	6710	14,060,710
20	Social tax was accrued on wages of employees in the secondary packaging process for "Megasol 100 ml" solution	2010	6520	1,687,290

21	General production expenses were allocated to the secondary manufacturing process for "Megasol 100 ml" solution	2010	2510	9,456,190
22	Depreciation was charged on automatic bottle labeling equipment used in the primary manufacturing process for "Megasol 100 ml" solution	2010	0230	2,492,500
23	Other expenses were charged for the secondary manufacturing process for "Megasol 100 ml" solution	2010	0220, 1040, 1090, 6990	1,457,620

The Table 2. accounting entries for the business operations presented in this table reveal the current state of cost accounting for the main production workshops at pharmaceutical industry enterprises. However, these production cost records, like the auxiliary production process operations, cannot fully convey to information users at exactly which stage of main production these costs were incurred. This, therefore, necessitates conducting scientific research on improving the accounting of main production costs at pharmaceutical manufacturing enterprises. In the course of our research, studies were also conducted to find solutions to these pressing problems and to improve the accounting of pharmaceutical production processes. Specifically, opening the following analytical accounts for production processes at pharmaceutical manufacturing enterprises is recommended (see Table 2)[14]

Table 2.

Recommended Chart of Accounts for Maintaining Accounting Records of Pharmaceutical Product Manufacturing Processes

(compiled by the author based on data from pharmaceutical manufacturing enterprises)

Current Chart of Accounts		Recommended Chart of Accounts	
No.	Name	No.	Name
2000	Main Production	2000	Accounts for recording pharmaceutical product manufacturing expenses
		2010	Expenses for infusion pharmaceutical product manufacturing line
2010	Main Production	2011	Infusion drug preparation workshop expenses
		2012	Infusion drug primary packaging workshop expenses
		2013	Infusion drug secondary packaging workshop expenses

		Expenses for tablet and capsule pharmaceutical product manufacturing line
	2020	
	2021	Tablet and capsule drug preparation workshop expenses
	2022	Tablet and capsule drug primary packaging workshop expenses
	2023	Tablet and capsule drug secondary packaging workshop expenses
	2030	Expenses for other form pharmaceutical product manufacturing line
	2031	Other form drug preparation workshop expenses
	2032	Other form drug primary packaging workshop expenses
	2033	Other form drug secondary packaging workshop expenses

We believe that the introduction of this chart of accounts into the practice of pharmaceutical manufacturing enterprises will serve to improve the accounting of production processes at enterprises in this sector.[15]

5. Conclusions

Based on the results of research conducted on improving the accounting of main production processes at pharmaceutical manufacturing enterprises in the country, the following important scientific conclusions were reached:

First, one of the most fundamental functions of accounting is to accurately and promptly deliver information on financial and business operations to information users. From this perspective, it can be stated that it is important to comprehensively and broadly convey information on current processes at pharmaceutical manufacturing enterprises — particularly on the costs of pharmaceutical production processes — to the management personnel of enterprises.

Second, the currently operative account 2000 — "Main Production" — and its composition are used for the purpose of maintaining accounting records of costs incurred for main production processes at enterprises. However, the name and status of this account do not clearly reflect this. For this reason, scientific and practical recommendations were developed, using pharmaceutical production processes as an example, for improving the name and composition of this account.

Third, drawing conclusions from the results of research conducted at pharmaceutical industry enterprises — namely, that pharmaceutical production processes are mainly carried out on two production lines — with the aim of separately recording costs for each production stage, a chart of analytical accounts reflecting costs for three main production processes within each of these lines has been recommended in accounting, including accounts 2011, 2012, 2013 as well as 2021, 2022, 2023. The costs recorded in these working accounts are reflected in a generalized manner in the synthetic accounts 2010 and 2020 in the accounting records. The system of accounts recommended by us adequately serves to provide information users with separate information for each production line.

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