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Accounting for Proprietary Preparations

BY JOHN H. DEVLIN

In order properly to consider the salient features of accounting for proprietary preparations it will first be necessary to outline the commercial economics of the industry. While the following observations might apply in general to all trade-marked preparations including foodstuffs, paints, etc. (except as to the percentage of gross profit), they have special reference to patent medicines, toilet preparations and the like.

It is seldom that a highly capitalized corporation is launched for the initial manufacture and sale of proprietary medicines and toilet preparations on an extensive scale, as the sales for the first few years are usually of such slow growth that heavy fixed charges would prove disastrous financially. The accountant, therefore, will generally find that a corporation of substantial size in this industry is the successor to a much smaller business entity and that on the books the asset "formulas, trade-marks and goodwill" obtrudes itself very conspicuously, as in most instances it properly should. However, in this trinity just why goodwill is customarily stated last is not evident, as it nearly always in such cases has a preponderating value. It is only in exceptional cases that the formulas, apart from the goodwill, have a high market value, as it is not difficult to imitate or substitute the average formula; but, conversely, the goodwill of popular proprietary preparations frequently will command an exceedingly high price though divorced from the formulas.

This leads to the suggestion that whenever the respective cost values can be obtained it is advisable to set up goodwill, trade-marks and formulas in separate accounts. Accepted accounting doctrine does not approve of fluctuations in the goodwill account, but trade-marks account may be increased by the cost of securing registration of additional trade-marks and in some cases also by the cost of successful litigation in protecting trade-mark rights, while formulas account may be increased by the cost of acquiring new formulas or improving old ones even though this cost may be in the form of salary paid to a staff chemist, and the account

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may be decreased by the cost of discarded formulas. When the three factors are combined in one account and a comparison of periodic balance-sheets discloses changes in the account the question arises as to which factor has been changed.

In enterprises of the type under consideration the gap between production cost and selling price is usually wide, the gross profits generally averaging from 60 to 65 per cent. This margin is made necessary by the heavy cost of advertising and other selling expenses. Therefore in the profit and loss statement interest centers on the selling rather than on the manufacturing costs, reversing the general rule, and it is incumbent on the accountant appropriately to analyze selling expenditures so that intelligent periodic comparisons may be made of the various factors comprising the cost of the selling effort and the exhibit of increases or decreases and percentages to sales.

The advertising account should be sub-classified into appropriate divisions, as for instance, publication advertising, poster advertising, window display material, demonstration expense, circularizing, free samples, etc.

Usually a sample or booklet is offered free in the advertisements, the latter being keyed so that statistical records may be kept of the number of replies from each advertisement for the guidance of the advertising manager.

If sample size packages are sold the revenue from this source should be carried in a separate sales account as the percentage of gross profit is likely to be considerably smaller than on the regular sales. The profits from the sale of samples might consistently be considered a reduction of advertising expense rather than a trading income.

Toward the close of the fiscal year, should extraordinary advertising expense have been incurred, the returns from which may not be expected until the following year, it will be appropriate to withhold such expenditure from the current profit and loss account, and to defer the amount under the caption "prepaid advertising expense."

Cuts, electros and drawings for advertisements may also be temporarily capitalized as deferred charges, but proper periodic reductions of the account should be instituted to cover the value of obsolete cuts and drawings and worn-out electros.

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In other balance-sheet and administrative accounts the classification and procedure would be much the same as for any other manufacturing and trading partnership or corporation.

MANUFACTURING COSTS

The management not infrequently will be found apathetic toward the proposition of installing a complete cost system on the theory that the selling price is standard and cannot be made to reflect the fluctuations in cost and also because there is a wide margin of safety between cost and selling price.

If the only function of a cost system were determination of exact cost there would be some logic in this argument, but it happens that a true cost system has another attribute—it is a potential agency for the reduction or stabilization of costs.

In considering the best cost system for proprietary preparations it should be borne in mind that in many cases the cost of the preparation itself is equalled or exceeded by the labor and material and overhead cost of packing, and it will be necessary to ascertain the cost of each of these two elements of the completed marketable product separately and then combine them, especially as the method of cost finding is likely to be different for the two elements.

FINISHED BULK PRODUCT COST

Finished bulk product cost comprises the liquids, pastes, powders, pills and tablets (compressed powders) in bulk before being enclosed in standard unit packages.

If the laboratory is a large one and its output consists of products of distinctive classes it would be advisable to departmentalize it for cost accounting purposes; but if methods of manufacture and character of products permit, it may be treated as one department, particularly if the products are exclusively liquid.

The manufacturing process as applied to liquids is almost entirely a chemical one and there is practically no direct labor in the cost accounting sense. The manual work consists mainly of moving material for the purpose of filling or emptying vats, etc. Labor is, therefore, a secondary rather than a primary cost element. The process hour basis for determining the cost of liquids will generally prove the most satisfactory. The process hour rate,

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to be applied to all productions utilizing the process facilities during the cost period, is determined as follows:

$$\frac{\text{Total operating costs of process for period}}{\text{Total process time of all production process for period}} = \frac{\text{process hour rate}}{\text{for period}}$$

If there are several processes or departments in the laboratory a separate hour rate should be determined for each process or department. The operating costs of a process will include not only such items as superintendence, repairs and depreciation on equipment, floor space charges, power, heat and light, insurance, etc., but also laboratory labor.

Through the medium of process time cards the periods of time each production order for a specific product has been in process is reported to the cost department. The total hours on these cards for the cost period divided into the process costs for the period will give the process hour rate in accordance with the foregoing formula.

To the process cost of each production order will be added the material cost, ascertained from material requisitions on the stockkeeper or from material-used reports, to find the complete cost, at which cost entry will be made on the finished bulk product stock records according to product.

The process hour basis may also be employed satisfactorily in finding the cost of mixing pastes, powders, etc., but the conversion of powders into pills and tablets is frequently a machine operation and it will be necessary, to find the cost thereof, to utilize the machine hour, direct labor or kindred basis.

PART FINISHED BULK PRODUCT COST

In some laboratories several materials are combined to form a part finished bulk product which is a common constituent of two or more finished bulk products. In such cases a production order should be issued for a specific quantity of the part finished product and the cost should be determined by the same method as for finished bulk products. When completed the part finished product will be recorded as such on the stock records at the ascertained cost and charged out of stock at this cost when it goes back into process to become part of a finished bulk product.

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MATERIAL COST OF BULK PRODUCTS

If conditions will permit, it is, of course, preferable to deliver to the laboratory out of the store-room (on a material requisition) the exact quantities of materials required for a given production order. Such requisitioned quantities will be credited on the stock records and charged to production at the stock record costs. As care must be observed, however, to avoid too much red tape this method is not always feasible, especially when it is desired to maintain secrecy as to formulas or when there are numerous ingredients to a formula, some of them in minute quantities.

In such cases the accountant will have to be content with a static material cost based on the chemist's estimate, but it may be approximately verified, and adjusted if necessary, from time to time through the medium of material-control accounts properly classified.

FINISHED PACKED PRODUCT COST

As previously suggested the cost of packing material, labor and overhead is often even greater than the cost of the product itself, so that accurate and illuminating analysis of the packing cost is of paramount importance.

MATERIAL

The items entering into the cost under the heading of material will usually be found to embrace a part or all of the following:

- Finished bulk products (to be packed);
- Bottles, jars, collapsible tubes, tin, wooden or pasteboard boxes;
- Corks, rubber stoppers, screw caps, patent box covers;
- Labels, paper seals, etc.;
- Folding paste-board cartons, corrugated wrapper cartons;
- Containers to hold standard quantity of unit packages, as for example $\frac{1}{2}$ dozen, 1 dozen, etc.

With the exception of the first mentioned item, there is no reason why the cost of any of these materials used on a given production order cannot be found accurately through the agency of material requisitions and proper stock records, particularly if production orders are issued for standard quantities, as for example 100 gross, 500 gross, etc., at a time. The employment of counting machines will simplify the counting of small items such as corks, labels and the like.

In some cases the exact quantity of the finished bulk product

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required on a given production order may be conveniently requisitioned and delivered to the packing department, but there are other instances wherein this is impracticable, as for instance where the product is delivered to the packing department through a piping system. When this condition exists the quantity packed may be closely estimated by multiplying the number of packages completed by the average quantity per package plus a proper percentage for spillage. The production order will be charged and the stock records credited accordingly.

LABOR AND OVERHEAD

The basis for ascertaining the labor and overhead cost will be governed largely by the character of the operations in vogue.

The operations will usually be found as follows:

Filling (enclosing product in bottles, jars, collapsible tubes, etc.);

Closing or sealing (affixing cork, screw cap, cover, etc.);

Labelling (attaching one or several labels to a single package);

“Cartoning” (inserting bottle, jar, tube, etc., in individual folding carton or corrugated paper carton). This operation frequently includes insertion of printed matter and samples in the carton.

“Containering” (packing a standard quantity of unit packages in container).

The direct labor basis of cost accounting for these packing operations will usually prove both simple and reasonably accurate, especially if piece-work prevails, as it often does. In some plants all these operations are entirely manual, while in others filling, corking and labelling are done by special machines either individually operated or more or less automatic. In such cases the machine-hour basis may be adopted, which will provide for the inclusion of the packing department overhead in the machine-hour rate.

With the direct-labor basis, the percentage that the entire overhead cost of the packing department bears to the entire packing direct-labor cost should be computed for the cost period and this percentage applied to the direct-labor cost on all production orders for the cost period.

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GENERAL LEDGER CONTROL OF COST SYSTEM

The cost system may be controlled by the following general ledger accounts:

- Laboratory raw materials.
- Packing raw materials.
- Laboratory work in process.
- Packing work in process.
- Part finished bulk product.
- Finished bulk product.
- Finished packed product.
- Cost of goods sold.

Materials requisitioned will be credited to the appropriate material accounts and charged to the proper work in process accounts.

Finished production orders will be credited to the indicated work in process account and charged to the proper part finished or finished product account. The cost figures entered on sales tickets will be credited to finished (packed) product account and charged to cost of goods sold account.

The foregoing is merely a bare outline for a cost system. Further details would be largely influenced by the conditions current in any given plant. What might be cost medicine for one plant not improbably would prove to be cost poison for another.