B-Com. Sem IV

Sub: CMA-II

Topic- Variance Analysis

L-A. D.B.



Now you see previously we discussed about Material mix variance in L-3 and L-2. Now we will concentrate on another material variance - Material yeild variance.

Mat yeild variance = Std cost per unit × Std output (−) Actual output

or S.C × (S.Y − A.Y.)

S.Y → Std yeild, A.Y. → Actual yeild.

See an example:

Actual output was 365 units

Standard output was 380 "

Standard cost per unit Rs. 33.84.

Then:

Mat yeild variance will be

→ Std cost × (Std output − Actual output)

→ R. 33.84 × (380 − 365) = Rs. 508 (A)

Note: Here if Std yeild is more than Actual yeild → though it gives positive figure - the result is unfavourable or adverse (A). So, in case of negative figure - it will be favourable variance.

Material yield variance is the difference between the standard yield and actual yield. That is here the important point is what is the output / yield derived from the input of mix and what is the standard output / yield

See an example:

| | Std | Actual |
|---|---|---|
| Mat X | 80 units @ Rs 5 | 60 units @ Rs 4.50 |
| Y | 70 units @ Rs. 9 | 90 units @ Rs 8.00 |
| | 150 | 150 |

There is a normal loss expected 10%.
Actual output 125 units.
Find out Mat Yield Variance.

Step-I Finding out revised standard rate.

Step-II Finding out Mat yield variance.

Now – Revised standard rate

$$= \frac{\text{Standard Cost of standard mix}}{\text{Standard yield after loss.}}$$

$$= \frac{(80 \text{ units} \times Rs.5) + (70 \text{ units} \times Rs.9)}{150 \text{ units} - 10\% \times 150}$$

$$= \frac{Rs.400 + Rs.630}{135 \text{ units}} = Rs.7.63$$

Now, Mat yield variance

= (Std yield – Actual yield) Std Revised Rate

= (135 units – 125 units) × Rs.7.63

= Rs.76.30 A Ans.

P.T.O. →

Please note that in this problem page 3 there is no difference of standard mix and actual mix. Std mix – was 150 units (80+70) and Actual mix – was 150 units (60+90) without considering the loss. In this case we will apply the above formula for yield variance.

Now, sometimes std mix and actual mix differs, in that case a different formula is used.

This is: MYV = (Revised Std Yield – Actual Yield) × Std Cost

| | Std | Actual |
|---|---|---|
| Mat X | 8 units @ Rs.40 Per unit | 10 units @ Rs 30 |
| Mat Y | 12 units @ Rs 60 Per unit | 20 unit @ Rs.68 |
| | 20 | 22 |

Actual Yield is 26.50 units

Stand loss 10%.

Sol: Here it is to be noted that Std mix and actual mix differs. So, here revised standard yield/output is to be calculated.

Secondly, revised standard yield is determined from finding out revised standard mix after applying proportion of X and Y.

Here actual quantity of X and Y total comes to 30 units (10+20).

Standard Proportion of X and Y → 8 : 12
or 2 : 3.

We will find out now:

Revised standard mix —

X → $30 \times \frac{2}{5}$ = 12 unit

Y → $30 \times \frac{3}{5}$ = 18 unit

Cost of these mix →

| | | |
|---|---|---|
| X → | 12 unit @ R 40 = | R 480 |
| Y → | 18 " @ Rs 60 = | R. 1080 |
| | 30 units | R. 1560 |
| Loss: 10% | 3 " | — |
| Revised Std Yeild | 27 units | R. 1560 |

Now, find out std rate (revised):

$$\frac{\text{Total Cost of revised std mix}}{\text{Revised output less loss}}$$

$$= \frac{R.\ 1560}{27 \text{ units}} = R.\ 57.78$$

Now,

Mat yeild variance = (Revised Std yeild − Actual yeild) × Std rate (Revised)

= (27 units − 26.00 units) × R 57.78

= R. 57.78 (A)

Thank.