RESULTS
The effect of alloxan induced diabetes (20 days) on the level of blood glucose and body weight of rats are depicted in Fig. 1.

The blood glucose level was significantly \((p < 0.01)\) increased in the diabetic rats. The body weights of the diabetic rats were reduced significantly \((p<0.05)\) after 20 days of alloxan injection.

The influence of diabetes on the content of total collagen of the skin and lungs of rats are represented in Fig. 2.

The collagen content of the skin of diabetic rats was significantly reduced \((p < 0.001)\), while the collagen content of the lungs was significantly increased \((p < 0.01)\) when compared with respective controls.

The impact of diabetes on the specific activities of \(\alpha\)-galactosidase, \(\alpha\)-glucosidase and acid phosphatase of the skin of rats are shown in Fig. 3.

The specific activities of \(\alpha\)-galactosidase, \(\alpha\)-glucosidase \((p < 0.001)\) and acid phosphatase \((p < 0.01)\) were significantly elevated in the skin of diabetic rats.
Fig. 4 represents the effect of diabetes on the specific activities of $\beta$-galactosidase, $\beta$-glucosidase and aryl sulfatase of rat skin.

Diabetes registered a significant increase in the specific activities of $\beta$-galactosidase ($p<0.01$), $\beta$-glucosidase ($p<0.001$) and aryl-sulfatase ($p<0.005$) in the skin of rats.

The impact of diabetes on the specific activities of $\alpha$-galactosidase, $\alpha$-glucosidase and acid phosphatase of rat lungs are represented in Fig. 5.

The specific activities of $\alpha$-galactosidase ($p<0.01$), $\alpha$-glucosidase ($p<0.001$) and acid phosphatase ($p<0.01$) significantly increased.

The influence of diabetes on the specific activities of $\beta$-galactosidase, $\beta$-glucosidase and aryl sulfatase of diabetic rat lungs are shown in Fig. 6.

The specific activities of pulmonary $\beta$-galactosidase ($p<0.01$) and $\beta$-glucosidase ($p<0.001$) were significantly increased due to diabetes. However, the specific activity of aryl sulfatase shows no significant alteration in the diabetic condition.
**Fig 1: Plasma Blood Glucose Level in Diabetic Rats**

- **Y-axis:** mg/100 ml

**EFFECT OF DIABETES ON THE BODY WEIGHT OF RATS**

- **Y-axis:** Weight in Grams

- **Legend:**
  - Control
  - Diabetic

The vertical line at the top of each histogram denotes SEM of 5 observations:
- a p < 0.05
- b p < 0.01
- c p < 0.001

Control vs Diabetic
Fig: 2

INFLUENCE OF ALLOXAN-INDUCED DIABETES MELLITUS ON THE
CONTENT OF TOTAL COLLAGEN IN THE SKIN AND LUNGS OF RATS

SKIN

LUNGS

The Vertical Line at the top of each Histogram denotes SEM of 5 observations
ap<0.05; bp<0.01; cp<0.001; Control Vs Diabetic
Figure 4: Influence of alloxan-induced diabetes mellitus on the specific activities of P-glucosidase, B-glucosidase, and aryl sulfatase of the skin of rats.

Control vs. Diabetic

The vertical line at the top of each histogram denotes SEM of 5 observations.

1.0 0.8 0.6 0.4 0.2 0.0

µM of P-nitrophenol liberated/hr/mg protein

Diabetic

Control

Aryl Sulfatase

P-glucosidase
The vertical line at the top of each histogram denotes SEM of 5 observations.

Control vs. Diabetic

µM of P-Nitrophenol Liberated/Mg Protein

Diabetic

Control

µM of P-Nitrocatechol Liberated/Mg Protein

µM of P-Nitrophenol Liberated/Mg Protein

β-Galactosidase, Aral Sulfatase, P-Glucosidase, Aral Sulfatase of the Lungs of Rats.

Influence of Alloxan-Induced Diabetic Mellitus on the Specific Activities of

Fig: 6