

Translation of the original document

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STUDY OF DIAMINE OXIDASE (DAO) ACTIVITY, DAO ENZYME TABLETS (DR Healthcare)

DAO activity study of two samples of DAO enzyme tablets and a kidney extract provided by the company DR Healthcare. In parallel, DAO activity of pure DAO enzyme (Sigma-Aldrich) has also been evaluated.

Samples

- Tablet DAO F10G1 (DAOfood diameter 5 mm)
- Tablet DAO F9G1 (DAOfood diameter 10 mm)
- Pig kidney extract Lot 17/0001
- DAOSIN Capsules
- DAO enzyme Sigma-Aldrich

Methodology

Kinetic study of the ability to degrade *in vitro* histamine by the different samples over time (1, 2, 4, 6, 8 and 24 hours). DAO activity is expressed in mU (degraded histamine nmols/minute).

The trial was carried out considering 2 tablets/DAO enzyme or 8.4 mg of extract in a buffer solution (0.05 M; pH 7) and subsequently adding a specific amount of histamine. The amount of the tested kidney extract is equal to the amount of extract present in the two tablets. As positive control, 0.6 mg of DAO enzyme (Sigma-Aldrich) was tested, which corresponds to 7% of the DAO enzyme contained in the kidney extract. Two independent trials have been carried out per sample.

Results

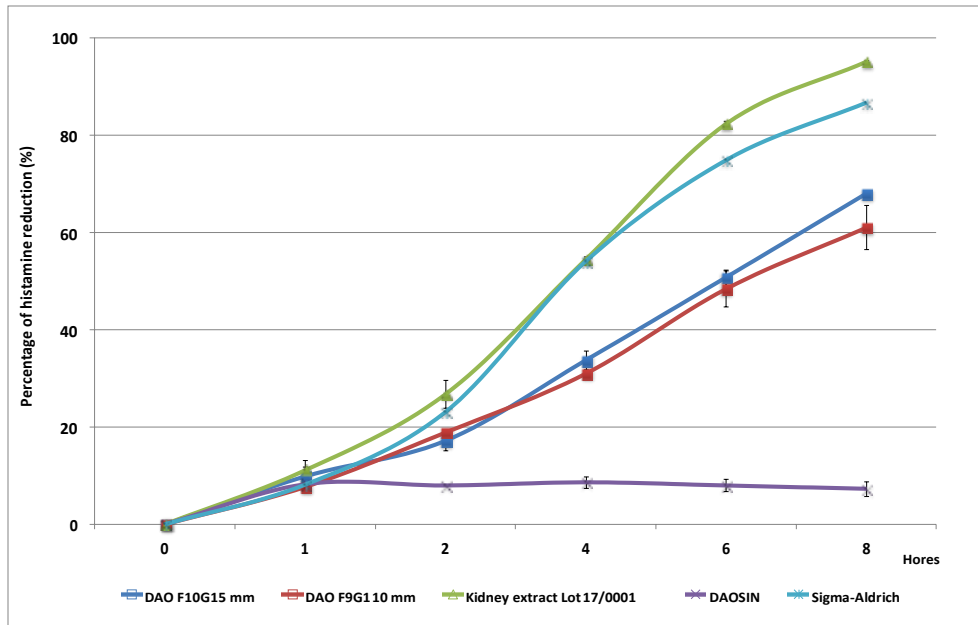
DAO Activity

Table 1. DAO activity (mean and standard deviation) of the F10G1 and F9G1 tablets, of the kidney extract (Lot 17/001) and of the Sigma-Aldrich DAO enzyme.

DAO Activity (mU)	
Tablet DAO F10G1 (DAOfood diameter 5 mm)	1.27 (0.02)
Tablets DAO F9G1 (DAOfood diameter 10 mm)	1.11 (0.11)
Pig kidney extract Lot 17/0001	1.85 (0.06)
DAOSIN	0.17 (0.01)
Sigma-Aldrich	1,72

Kinetic study of histamine reduction by the different samples

Figure 1. Percentage of *in vitro* histamine reduction over time of F10G1 and F9G1 tablets, kidney extract (Lot 17/001), and Sigma-Aldrich DAO enzyme



After 24 hours, the percentage of histamine reduction was 100% in all samples.

Conclusions

Tablets F10G1 and F9G1 showed ability to reduce *in vitro* histamine. No differences were observed in the DAO activity of tablets F10G1 and F9G1.

Activity of tablets F10G1 and F9G1 is slightly lower than the one obtained from the kidney extract used for its formulation (lot 17/0001).

DAO activity values obtained from tablets and kidney extract, are of the order of that obtained from the pure DAO enzyme (Sigma-Aldrich).