

**VIVA (USA), Inc.
444 Madison Avenue
New York, NY 10022**

PAO V

A NEW DIETARY INGREDIENT

INFORMATION FILE

**Office of Special Nutritionals
Center for Food Safety & Applied
Nutrition
HFS-455
Food and Drug Administration
200 C Street
SW Washington D.C. 20204**

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PAO V COMPOSITION

PAO V
DIETARY SUPPLEMENT OF THE BARK OF
PAO PEREIRA

COMPOSITION

Names of the Components	Quantity per Capsule	Quantity in Percentage	Function	Pharmacopoeia References
<u>Active Principle</u>				
Extract of Pao Pereira (24/1)	125 mg	45.1%	Active Principle	Brazilian Pharmacopoeia (1926)
<u>Excipients</u>				
Lactose	61.5 mg	22.2%	Solvent	European Pharmacopoeia 2 II - 187 (1985) US Ph 23-NF 18
Cellulose Microcrystalline	61.5 mg	22.2%	Solvent/ Binder	European Pharmacopoeia 2 II - 316 (1984) US Ph 23-NF 18
Magnesium Stearate	3.75 mg	1.4%	Lubricant	European Pharmacopoeia 2 II - 229 (1983) US Ph 23-NF 18
Corn Starch	25.25 mg	9.1%	Disintegrating	European Pharmacopoeia 2 II - 344 (1984) US Ph 23-NF 18
Gelatin Capsule	Q.S.		Capsule	French Pharmacopoeia 10 (1986) US Ph 23-NF 18

PAO V TOXICOLOGY STUDY

- **Certificate of Accuracy for the Quality Control Affidavit**
- **Quality Control Affidavit, English translation**
- **Quality Control Affidavit, French version**
- **Toxicology Study**

CERTIFICATE OF ACCURACY

TRANSLATION:
FROM FRENCH TO ENGLISH


STATE OF NEW YORK)
) ss:
COUNTY OF NEW YORK)

On this day personally appeared before me Nadia Kaddour who, after being duly sworn, deposes and says:

That she is thoroughly conversant with the French and English languages and able to translate from French into English;

That she has carefully made the attached translation from the original document written in the French language; and

That the attached translation is a true and correct English version of such original, to the best of her knowledge and belief.

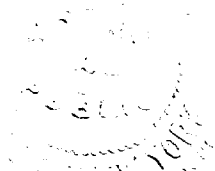


Nadia Kaddour

Sworn to and subscribed
before me this 29th day
of August, 1996.


NOTARY PUBLIC

JENNIFER W. KOTZEN
NOTARY PUBLIC, STATE OF NEW YORK
NO. 02KO5053916
QUALIFIED IN NEW YORK COUNTY
COMMISSION EXPIRES FEB. 26, 1998



QUALITY CONTROL

Inspections were regularly carried out during the various stages of this assay, at the following dates :

STAGE OF ASSAY	DATE OF INSPECTION
PROTOCOL REVIEW	2 JUNE 1993
ASSAY PREPARATION	23 JUNE 1993
ASSAY UNDERWAY	30 JUNE 1993
	14 JULY 1993
PRELIMINARY REPORT REVIEW	16 SEPTEMBER 1993
FINAL REPORT "AUDIT"	29 SEPTEMBER 1993

This report was accepted by the quality guarantee agent as a strictly accurate presentation of results obtained.

Montrouge, 29 September 1993

(signed) Monique HEROLD, D. Sc.

We, the undersigned, declare that this assay was carried out under our supervision according to procedures described in the present report and that the latter is the faithful account of results obtained.

Montrouge, 29 September 1993

(signed) Marie-Gilberte BORZEIX, M.Sc.
Research Director

(signed) Professor Jean CAHN, MD, D. Sc
Histopathologist

CONTROLE DE QUALITE

Des inspections ont été pratiquées régulièrement lors des différentes phases de cette étude, aux dates indiquées ci-dessous :

PHASE DE L'ETUDE	DATE D'INSPECTION
REVUE DU PROTOCOLE	2 JUIN 1993
MISE EN PLACE DE L'ETUDE	23 JUIN 1993
ETUDE EN COURS	30 JUIN 1993
	14 JUILLET 1993
REVUE DU RAPPORT PRELIMINAIRE	16 SEPTEMBRE 1993
"AUDIT" DU RAPPORT FINAL	29 SEPTEMBRE 1993

Ce rapport a été accepté par l'assureur de qualité comme étant une représentation rigoureuse des résultats obtenus.


Montrouge, 29 Septembre 1993

M. Herold

Monique HEROLD D. Sc.

Nous soussignés, déclarons que cette étude a été réalisée sous notre contrôle selon les procédures décrites dans le présent rapport et que celui-ci est le reflet fidèle des résultats obtenus.

Montrouge, 29 Septembre 1993



Marie-Gilberte BORZEIX, M. Sc.
Directeur de Recherche



Professeur Jean CAHN, MD. D. Sc.
Histopathologiste

SIR international research institute

**TOXICOLOGY STUDY OF PAO V COMPOUND
28 DAY ORAL ADMINISTRATION TO MALE AND FEMALE RATS**

Study carried out by:

**SIR international
6 rue Blanche
92120 MONTROUGE**

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SUMMARY

SUMMARY

Tested product	Pao V.
Animal species	Male and female Sprague-Dawley rats.
Number of animals per batch	Twenty (10 males, 10 females).
Route of administration	Oral (intra-gastric intubation). Controls rats received solvent only (distilled water). Treatments were carried out daily, 7 days a week, between 9 and 11 AM.
Treatments per batch	0 mg.kg ⁻¹ (controls). - Male rats : - 56.5 mg.kg ⁻¹ - 226 mg.kg ⁻¹ - Female rats : - 73.2 mg.kg ⁻¹ - 292.8 mg.kg ⁻¹ .
Length of treatment	- Males : 28 days - Female : 28 days
RESULTS	Compared to controls, the following was observed :
Mortality	None.
Clinical manifestations	None.
Weight increase	Similar to that of controls.
Food intake	Similar to controls.
Water intake	- Transiently reduced between D 15 and D 18 in male rats. - Identical to that of controls, in females.
Hematology	No change indicating any pathological alteration of hematologic constants.

Clinical biochemistry

No change indicating any pathological functional alteration.

Urinary data

- Similar to that of controls, in male rats.
- Increase of urine volume passed between 7 hours and 24 hours following the last treatment, accompanied by decrease of urine osmolarity in females treated with the high dose.

Terminal examinations

- Macroscopic pathology: no anomaly that could be related to treatment.
- Organ weight :
 - * non coherent variation of liver weight (decrease using the low dose in males, increase using the high dose in females).
 - * increase of kidney weight in females at the high dose.
- Microscopic pathology : no histological difference is observed between controls and animals treated with Pao V. at high dose. The rarely observed morphological modifications remain within limits of spontaneous pathology for this animal species.

1 - Description of assay

- | | |
|------------------------------------|--|
| 1.1. Objective of the assay | Tested product subacute toxicity determination following repeated oral administration to the rat for 28 days. |
| 1.2. Assay carried out by | SIR international
6 rue Blanche
92120 MONTROUGE
France |
| 1.3. Supervisor | Marie-Gilberte BORZEIX, Master of Science, DEA in Psychophysiology (Paris VI University), expert in toxicology and pharmacology, Research Director (SIR international). |
| 1.4. Pathologist | Jean CAHN, MD, Doctor of Science, former histology and anatomopathology assistant at the Paris Faculty of Medicine. |
| 1.5. Veterinarian | Animal sanitary condition was checked by Doctor Ch. Boutelier, biologist veterinarian, chief of Services (retired), 15 rue du Limousin, 91220 Bretigny s/Orge. |
| 1.6. Technicians | Jean-Pierre AKIMJAK, BTS (qualified technician) in biological analysis, hemato-coprology certificate from the Paris Faculty of Medicine.
Jean ANGINARD, member of the managing staff, biologist.
Dominique ANGINARD, biochemist.
Philippe CHARLES, psychophysiology technician.
Maguy LENFANT, histology technician.
Pierre ROUSSELON, animal care technician.
Jean VIKINNE, animal care technician.
Suzanne WEBER, biochemist. |
| 1.7. Dates of the assay | June-July 1993. |
| 1.8. Date of report | 29 September 1993. |

1.9. Filing

All individual data, the protocol, and a copy of the final report will be kept for five years in SIR international files.

1.10 Statistical analysis

Statistical data processing was carried out with SPSS software for WINDOS 5.0 on a 486 DX2-66 computer.

Statistical study was carried out with two boundaries to test the following null (H0) hypothesis: "in male and female rats alike, the three experimental series are similar", first species risk alpha being 5 percent.

Variance analysis was carried out for all quantitative data using parametric (AOV) or non parametric (Kruskall-Wallis test) methods according to whether distribution was normal or not. In case of statistically significant inter-series difference, either the Nemann-Keuls parametric test or the Mann-Whitney "U" non parametric test was applied.

For organ weight, covariance analysis was applied to raw data to take account of eventual differences related to body weight.

2 - Tested product

2.1. Substance

Pao V.(Batch RDJA 1059).

2.2. Supplier

MU Laboratoire
Z.A.C. du Pra de Serre
63960 VEYRE-MONTON
France

3 - Solvent

3.1. Solvent

Twice-distilled water.

3.2. Supplier

Prepared on site in a still (SERLABO, 26 rue Saint Gilles, 75003 PARIS, France).

4- Preparation of study

- 4.1. Species Rat.
- 4.2. Strain Sprague-Dawley - OFA - SD (IOPS Caw).
- 4.3. Breeder Iffa Credo, Domaine des Oncins,
69592 L'ARBRESLE Cedex
- 4.4. Total number of animals received Thirty-two male rats and thirty-two females.
- 4.5. Age at start of assay Five weeks (34/36 days).
- 4.6. Weight at start of assay - Males (150g)
- Females (130g).
- 4.7. Number of experimental animals 30 males, 30 females.
- 4.8. Acclimatization period and sanitary measures Rats are acclimatized for 5 days, during which they are regularly weighed and trained for intragastric treatment so as to eliminate any deficient animal.
- 4.9. Identification Each cage is identified using a colored label. Rats, two to each cage, are identified by an ink marking of the same color on the base of the tail.

5 - Stabulation

- 5.1. Animal house Animals are kept in a room where temperature is set at 22 ± 1°C and humidity varies from 40 % to 70 %. A clock controls the 12 hour day/night cycle (7 AM/7 PM). Filtered air is renewed 8 times hourly.
- 5.2. Housing Polypropylene cages containing a dust-free sawdust litter (UAR, EPINAY S/ORGE, France). Each 43x28x18.5 cm cage contains five rats.
- 5.3. Sanitary measures Sawdust is renewed twice a week. Cages are washed and disinfected every week.
- 5.4. Food Animal feed AO4-10 (UAR, EPINAY S/ ORGE, France), *ad libitum*
- 5.5. Food analysis Quality analysis voucher supplied by UAR.
- 5.6. Water Tap water from the local network was available *ad libitum* in feeding bottles.
- 5.7. Water analysis Water is analyzed at regular intervals by the Departement des Hauts de Seine (local authority).

6 - Method

- 6.1. Product preparation A 10 % stock solution was prepared every week : aqueous solution was boiled, then filtered on paper (Macherey-Nagel R, Düren, Germany), stored in a refrigerator (+2 to +4° C) and extemporaneously diluted with distilled water.
- 6.2. Doses Male rats : 56.5 mg.kg⁻¹ (1/20 LD₅₀) and 226 mg.kg⁻¹ (1/5 LD₅₀).
Female rats : 73.2 mg.kg⁻¹ (1/20 LD₅₀) and 292.8 mg.kg⁻¹ (1/5 LD₅₀).
- 6.3. Route of administration Oral (intragastric intubation).

- 6.4. Justification of route Oral route recommended for clinical use.
- 6.6. Frequency and length of treatment Daily, 7 days a week for 28 consecutive days.
- 6.7. Weight increase To calculate weight evolution, animals were weighed twice a week (Tuesday/Friday).
- 6.8. Food and water intakes Water and food intakes were measured twice a week (Tuesday/Friday).
- 6.9. Nutritional efficacy coefficient It was calculated using the following formula:

$$\frac{\text{daily food intake (g/rat)} \times \text{number of days}}{\text{weight evolution (g)}}$$

7 - Clinical chemistry

7.1. Hematology

- Cells (erythrocytes, leucocytes) were counted using a Coulter counter (Coultronics, model D IND). Erythrocyte counts are expressed in tera.l^{-1} ; leucocytes counts, in giga.l^{-1} .
- Thrombocyte counts, expressed in giga.l^{-1} , were carried out with a Coulter counter (Coultronics, model ZBI).
- Hemoglobin (mmol.l^{-1}) was measured with a hemoglobin meter (Coultronics).
- Hematocrit (Ht) was obtained by blood sample centrifugation (14813 g for 5 minutes) in a Hauwsley centrifuge (Jouan).

- Mean corpuscular volume (fl) was calculated from :

$$MCV = \frac{Ht \times 1000}{\text{erythrocyte count}}$$

- Mean corpuscular concentration (mmol.l⁻¹) was calculated from :

$$MCC = \frac{\text{hemoglobin}}{\text{hematocrit}}$$

7.2. Blood biochemistry

- Calcium (mmol.l⁻¹), measured according to Sarkar and Chauhan (1967).
- Total protein (g.l⁻¹), measured using a technique adapted from the Biuret reaction, according to Weichselbaum (1946).
- Urea (mmol.l⁻¹), measured using a method adapted from that of Fawcett and Scott (1960).
- Creatinin (mmol.l⁻¹), measured according to Jaffe, using the colorimetric method of Popper et al. (1937).
- Total bilirubin (umol.l⁻¹), measured according to Jendrassik and Grof (1938).
- Alanine aminotransferase (ALAT), measured using method optimized according to recommendations of the German Society for Clinical Chemistry (1970, 1972), and expressed in IU.l⁻¹.
- Aspartate aminotransferase (ASAT), measured using method optimized according to recommendations of the German Society for Clinical Chemistry (1970, 1972), and expressed in IU.l⁻¹.
- Alkaline phosphatases (IU.l⁻¹), measured according to Bowers and Mc Comb (1975).
- Total cholesterol (mmol.l⁻¹), measured according to the CHOD-PAP enzymatic method.

7.3. Urine analysis

A diuresis test was carried out over a 24 hours period following a 30 ml.kg⁻¹ water overload (which included tested product at the 28th treatment). Animals, placed in individual cages for the study of metabolism, were deprived of water and food during this period.

Urine volume was measured 7 and 24 hours following water overload and percentage of excretion compared to this overload was calculated.

Biochemical dosages were carried out on urine collected between 7 and 24 hours.

- Creatinin (mmol.l^{-1}).
- Osmolarity (mOsm.l^{-1}), measured with a reflectometer (ERMA Optical Works Ltd., Japan).
- Reagent strips (Combur⁹-test[®], Boehringer-Mannheim) were used to detect proteins, glucose, bilirubin, urobilinogen, ketone compounds, nitrites, leucocytes, blood and to estimate pH.

8 - Pathology

8.1. Euthanasia

All the rats were euthanasized by decapitation.

8.2. Postmortem examination

Postmortem examination was carefully performed on all the animals, special attention being paid to macroscopic examination of the gastrointestinal tract.

The following organs were weighed as soon as possible after excision so as to avoid as much as possible tissue dehydration: kidneys (left, right), adrenals, (left, right), liver, heart, thymus, brain.

N.B. Organ weight is expressed as absolute value and as relative value compared to body weight at time of sacrifice.

8.3. Histopathology

The following organs were fixed and preserved in 10 % buffered formalin : stomach (in case of a macroscopic lesion), liver, gonads (testicles#, ovaries), ileon + Peyer plaques, pancreas, lungs, spleen, kidneys (left, right), thymus, thyroid and parathyroids, adrenals.

prior fixation for 24 hours in Stieve's fixative.

N.B. Histology of these organs was studied for the control and high dose series. Other organs were preserved after paraffin embedding.

9 - Results

PARAMETERS	SEX	
	MALE	FEMALE
Body weight	1 to 5	34 to 38
Food intake	6 to 8	39 to 41
Water intake	9 to 12	42 to 44
Water/Food ratio	13 to 16	45 to 47
Hematology	17 to 21	48 to 50
Biochemistry (blood, urine)	22 to 25	51 to 56
Urine (volume, pH)	26 to 29	57 to 60
Organ weight	30 to 33	61 to 65

Individual data are listed in appendix A 1 to A 17 for male rats and A 58 to A 84 for female rats.

9.1. Mortality

No mortality was observed in the course of the assay.

9.2. Clinical examination

No modification of neuromotor behavior was detected, either in male rats or in females.

9.3. Weight evolution

Weight increase was progressive and regular, similar for the three experimental series, showing that Pao V. does not affect weight gain of young male and female rats.

9.4. Food intake

Food intake was never affected by Pao V. intragastric administration.

9.5. Water intake

Water intake transiently increased in male rats between days 15 and 18, under the effect of 226 mg.kg^{-1} . It was never modified in females.

9.6. Water/food ratio

This ratio increased between D15 and D18 in male rats, on account of a transient water intake increase during that period.

9.7. Nutritional efficacy coefficient

This ratio progressively increases with time, more regularly in males than females ; this reflects the progressive stabilization of food intake in animals that were very young at start of assay (35 days on average).

9.8. Hematology

No pathological variation was observed.

There was only, in male rats, an increase of hemoglobin using the low dose (10.5 versus 10.2 mmol.l⁻¹ in controls), leading to an increase of mean corpuscular hemoglobin concentration (MCC: 21.86 versus 21.13 mmol.l⁻¹ in controls) ; these statistically significant modifications have no biological significance.

9.9. Clinical biochemistry

Both in males and females, ASAT increases using the high dose ; this statistically significant increase is of low amplitude: +20 % in males and +46 % in females.

In the absence of ALAT modification, ASAT increase does not signify liver alteration and, in the absence of cardiac weight increase, it does not evoke heart failure.

Bilirubinemia decrease observed with the low dose in females has no biological significance.

9.10 Urinary data

In males, no alteration of urinary data was observed, except for a slight acidification of urine collected between 7 and 24 hours in animals treated with the high dose.

In contrast, in females treated with the high Pao V. dose, urinary excretion increase (volume collected between 7 and 24 hours), accompanied by a decrease of urine osmolarity, evokes a slight renal functional disturbance, the nephron having lost part of its urine concentrating ability.

9.11. Postmortem examination

9.11.1 Macroscopic examination

Postmortem examination did not reveal any anomaly that could be related to Pao V. treatment.

The only detected anomaly concerns the gastric mucosa, where hyperhemic regions accompanied by ulcerations were observed ; this must be ascribed to stress due to the 24 hours total fast prior to sacrifice. Very little difference is observed in its incidence among various experimental batches, as indicated by the following table, females being more susceptible to fasting than males.

RATS WITH ONE OR SEVERAL GASTRIC ULCERATIONS			
Series		Males n° S ...	Females n° S ...
controls		1080	-
Pao V.	Low dose	-	1056 1068 1072
	High dose	-	1052 1061

A morphological abnormality was noted in male rat n° S 1085 treated with 56.5 mg.kg^{-1} Pao V. ; this animal had a constriction of the spleen.

9.11.2 Organ weight

Liver weight was decreased in males receiving the low dose, but, on the contrary, it was increased in females receiving the high dose. In the latter, kidney weight was also increased, probably due to increased diuresis.

9.11.3. Microscopic examination of six organs (liver, spleen, kidneys, gonads (testicles and ovaries), thyroid, parathyroids).

The only observed anomalies consisted of : the presence of a few interstitial hemorrhagic suffusions in the kidney of male control rat n° S 1093 (appendix 30), of a discreet centrolobular steatosis, without lymphocyte-type infiltration, in female control rat n° S 1053 (appendix 86) and, finally, of a small sclerotic region of inflammatory origin in the renal cortex, at tubular level, in male rat n° 1077 treated with 226 mg.kg^{-1} Pao V. (appendix 47).

On the whole, histological examination of the different organs shows :

- *in the liver :*

Absence of peri- or centrolobular steatosis. No nucleolysis.
No lymphocyte-type infiltration.

- *in the gonads :*

* *testicles :*

All stages of spermatogenesis were present. No alteration of Sertoli basal cells. Abundant spermatocytes in lumen of tubes.

* *ovaries* :

Presence of ovules of the first order and of ovules with ovocytes, with or without liquor folliculi. Presence of corpora lutea with or without necrotic stage. Tube epithelium was normal, with no trace of inflammation.

- *in the thyroid* :

Presence of signs of activity, large vesicles with cuboid epithelium. Nuclei were apical, colloid was dense, generally not retracted.

- *in the parathyroids* :

They were normal, without any atrophic or hemorrhagic lesions.

- *in the spleen* :

White pulp containing a germinative center. Red pulp with no atrophic or hemorrhagic lesions.

10 - Conclusion

Taken together, data collected in this Pao V. predictive toxicity assay carried out over a four week period shows that at the two tested doses (respectively corresponding to 1/20 and 1/5 LD₅₀, i.e., 56.5 and 226 mg.kg⁻¹ for males and 73.2 and 292.8 mg.kg⁻¹ for females), and compared to controls, Pao V.

- does not induce any lethality or any behavioral manifestation,
- does not modify food intake or weight increase of males or females,
- reduces, but only contingently (between D15 and D18), water intake of male rats,
- does not induce any modification of hematologic constants,
- does not induce any change of measured clinical chemistry parameters,
- does not affect male rat urinary data, but induces urine volume increase and osmolarity decrease some length of time after treatment (between 7 and 24 hours) in females treated with the high dose,
- does not affect organ weight in male rats, but induces kidney and liver weight increase in high dose treated female rats,
- does not induce macroscopically detectable morphological alterations,
- does not induce any microscopic alteration that could be attributed to treatment.

RAT AND MOUSE MAINTENANCE DIET

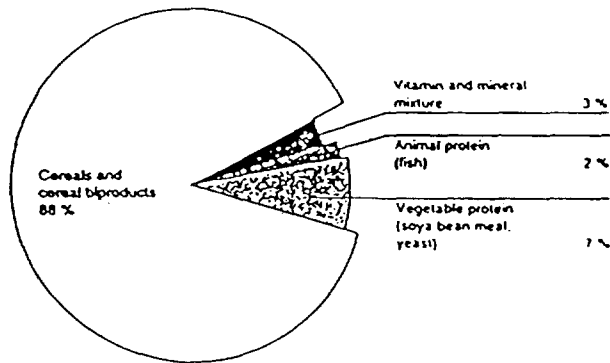
A04

Certified A04
Irradiated Certified: A04-10

Control A04C
Control Irradiated: A04C-10

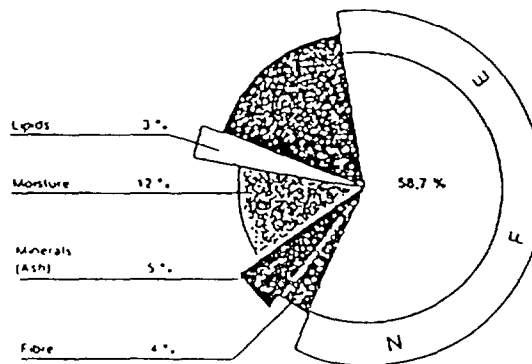
Form : Pellets Ø 15 mm
Standard pack: certified: 25 kg paper bag
control : 25 kg double paper bag
with aluminium on the outside
Rate per day : rat 18 to 25 g, mouse 5 to 10 g.

Formula



Average analysis

Calorific value (kcal/kg) 2 900



Amino acid values (calculated/kg)

	9 800 mg	Arginine
	2 300 mg	Cystine
	8 500 mg	Lysine
	3 200 mg	Methionine
	1 900 mg	Tryptophan
	8 100 mg	Glycine

Fatty acid values (calculated/kg)

	2 600 mg	palmitic ac.
	Traces	palmitoleic ac.
	500 mg	stearic ac.
	8 000 mg	oleic ac.
	14 500 mg	linoleic ac.
	Traces	linolenic ac.

Mineral and Vitamin content

MINERALS calculated/kg			
	Not. val.	CMV val.	
P	mg	5 900	5 900
Ca	mg	3 300	5 000
Na	mg	300	1 600
K	mg	6 700	—
Mg	mg	1 900	100
Mn	mg	50	40
Fe	mg	90	150
Cu	mg	5	15
Zn	mg	10	25
Co	mg	—	15
I	mg	0,3	—

VITAMINS calculated/kg			
	Not. val.	CMV val.	TOTAL
Vitam. A	UI	Traces	7 500
Vitam. D3	UI	Traces	1 500
Vitam. B1	mg	6	1
Vitam. B2	mg	—	4,5
Vitam. B3	mg	—	6,5
Vitam. B6	mg	3	1,3
Vitam. B12	mg	0,01	0,01
Vitam. E	mg	15	15
Vitam. K3	mg	0,25	2,25
Vitam. PP	mg	60	15
Ac. Folic	mg	0,5	0
Biotine	mg	0,04	0
Choline	mg	1 200	400
			1 600

"CONTROL"

PARAMETERS		ACCEPTANCE	RESULTS	ACCEPTANCE
PHYSICAL PROPERTIES				
# of pellets	mm	15.5	16.5	16.5
Crushing strength	kg/cm ²	15	20.9 ± 3	25
Scratch resistance	%	96	98 % ± 1 %	-
Dust	%	-	< 1	4
COMPOSITION				
Mineral mixture			*	
Trace element premix			*	
Vitamin A premix			*	
Water	%	10	12.5 ± 0.7 %	14
Proteins	%	16	17.9 ± 0.8 %	20
Lipids	%	2.5	3.1 ± 0.3 %	3.7
Carbohydrates (NFE)	%	55	58.0 ± 1.5 %	61
Including starch	%	31	39.9 ± 4.2 %	49
Fibre	%	3	3.8 ± 0.4 %	5
Mineral (Ash)	%	4	5.2 ± 0.4 %	6.5
Ca	mg/kg	6 000	8 300 ± 700	10 000
P	mg/kg	4 900	5 900 ± 500	7 000
Na	mg/kg	1 500	1 900 ± 300	3 000
K	mg/kg	4 500	6 700 ± 1 000	9 000
Mn	mg/kg	50	90 ± 20	130
Vitamin A	UI/kg	4 000	7 200 ± 1 700	11 000
Microbiology				
Viable organisms	g	-	7 000 ± 7 000	100 000
Total coliform count	g	-	0	5
E Coli	g	-	0	0
SR Anaerobes	g	-	Occ. 20	100
Salmonella	g	-	-	0
Mycology				
Altoxin	µg/kg	-	< 1	5
Ochratoxin	µg/kg	-	< 12	200
Zearalenone	µg/kg	-	< 50	1 000
Sterigmatocystin	µg/kg	-	< 30	300
Pesticides				
Lindane	µg/kg	-	20 ± 20	100
α HCH	µg/kg	-	Sometimes traces	100
Heptachlor	µg/kg	-	< 1	20
DDT	µg/kg	-	< 1	100
DDE	µg/kg	-	< 1	100
Dieldrin	µg/kg	-	< 1	20
Endosulfan	µg/kg	-	< 1	-
PCB	µg/kg	-	< 1	50
Other OCN	µg/kg	-	< 1	100
Total OCH count	µg/kg	-	-	100
Other Pesticides				
Malathion	unit	-	600 ± 600	5 000
Pyrimiphos methyl	µg/kg	-	100 ± 100	2 500
Chlorpyrifos-methyl	µg/kg	-	150 ± 150	1 500
Dimethoate	µg/kg	-	< 5	1 000
Phosalon	µg/kg	-	< 5	-
Other OPH	µg/kg	-	< 5	5 000
Total OPH count	µg/kg	-	-	5 000
Heavy Metals				
Lead	µg/kg	-	400 ± 300	1 500
Mercury	µg/kg	-	50 ± 45	200
Arsenic	µg/kg	-	250 ± 150	1 000
Cadmium	µg/kg	-	70 ± 50	250
Selenium	µg/kg	-	200 ± 100	600
Nitrosamines				
NO3	mg/kg	-	100 ± 50	500
NO2	mg/kg	-	3 ± 2	500
NDMA	µg/kg	-	3 ± 2	10
NDEA	µg/kg	-	1 ± 1	10
NOFA	µg/kg	-	-	-
NDBA	µg/kg	-	Sometimes traces	10
NPI	µg/kg	-	Sometimes traces	10
Total nitroso compound counts	µg/kg	-	Sometimes traces	10

Randomization : ASSAY R/92/6439
Male rat - oral route

Randomization algorithm base number : 6439

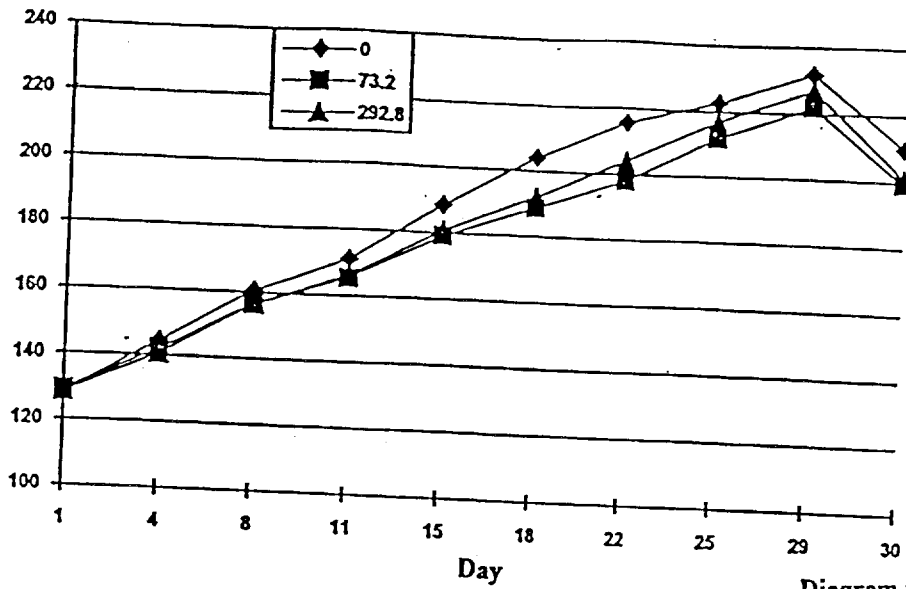
SERIES	CAGE	n° GLP
Pao V. 56.5 mg/kg	1	S 1087 S 1091
Pao V. 226 mg/kg	2	S 1090 S 1095
Controls	3	S 1093 S 1097
Pao V. 56.5 mg/kg	4	S 1085 S 1101
Pao V. 226 mg/kg	5	S 1096 S 1107
Controls	6	S 1099 S 1102
Controls	7	S 1078 S 1080
Pao V. 56.5 mg/kg	8	S 1088 S 1105
Pao V. 226 mg/kg	9	S 1100 S 1104
Controls	10	S 1103 S 1108
Pao V. 226 mg/kg	11	S 1079 S 1082
Pao V. 56.5 mg/kg	12	S 1092 S 1106
Pao V. 56.5 mg/kg	13	S 1083 S 1089
Controls	14	S 1186 S 1098
Pao V. 226 mg/kg	15	S 1077 S 1084

21 June 1993

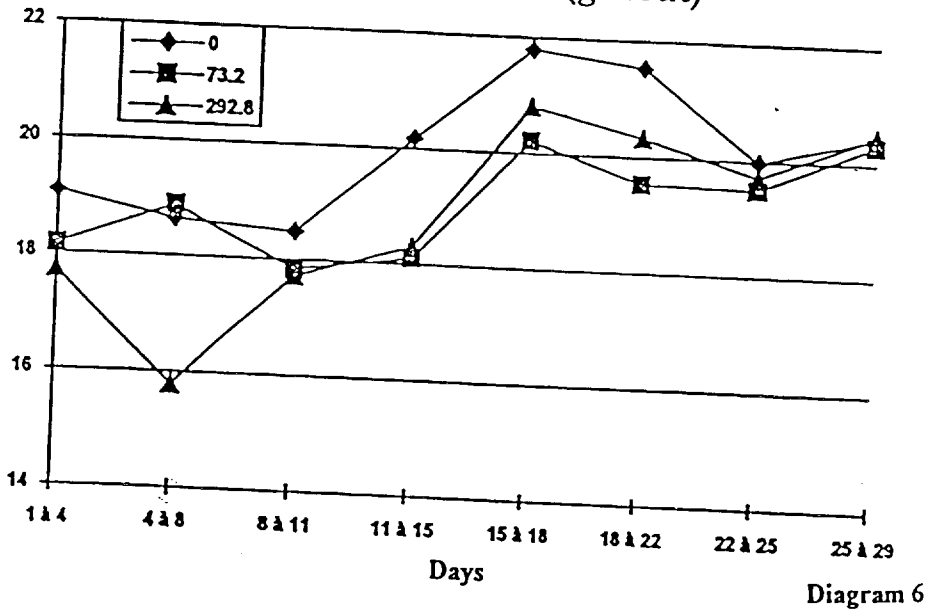
(signed)J-M DUPONT

FEMALE RAT

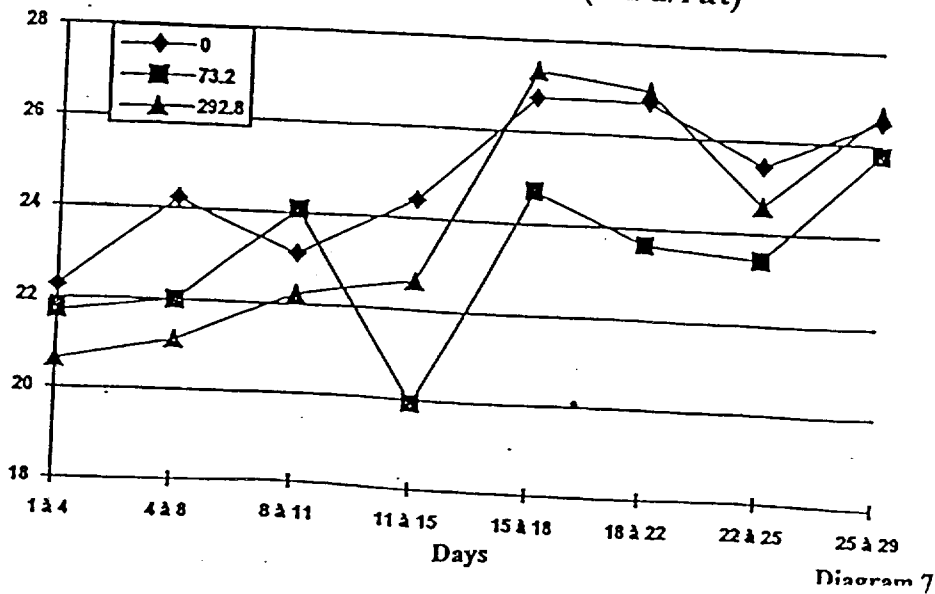
WEIGHT EVOLUTION (GRAMS)



FOOD INTAKE (g/d/rat)



WATER INTAKE (ml/d/rat)



Randomization : ASSAY R/92/6439

Female rat - oral route

Randomization algorithm base number : 9346

SERIES	CAGE	n° GLP
Pao V. 292.8 mg/kg	1	S 1052 S 1057
Controls	2	S 1053 S 1076
Pao V. 73.2 mg/kg	3	S 1046 S 1047
Pao V. 292.8 mg/kg	4	S 1050 S 1071
Pao V. 73.2 mg/kg	5	S 1055 S 1173
Controls	6	S 1065 S 1069
Controls	7	S 1062 S 1075
Pao V. 292.8 mg/kg	8	S 1059 S 1067
Pao V. 73.2 mg/kg	9	S 1056 S 1064
Pao V. 73.2 mg/kg	10	S 1060 S 1068
Pao V. 292.8 mg/kg	11	S 1061 S 1063
Controls	12	S 1058 S 1074
Pao V. 73.2 mg/kg	13	S 1048 S 1072
Controls	14	S 1045 S 1054
Pao V. 292.8 mg/kg	15	S 1051 S 1066

23 June 1993

(signed)J-M DUPONT

Cage distribution in animalerie

Male rats

cage 1 f S 1087 - 1091	cage 2 F S 1090 - 1095	cage 3 C S 1093 - 1097	cage 4 f S 1085 - 1101	cage 5 F S 1096 - 1107
cage 6 C S 1099 - 1102	cage 7 C S 1078 - 1080	cage 8 F S 1088 - 1105	cage 9 f S 1100 - 1104	cage 10 f S 1103 - 1108
cage 11 F S 1079 - 1082	cage 12 C S 1092 - 1106	cage 13 f S 1083 - 1089	cage 14 C S 1086 - 1098	cage 15 F S 1077 - 1084

rat S ... : n° BPL

C = controls

f = Pao V. low dose (56.5 mg/kg⁻¹)F = Pao V. high dose (226 mg/kg⁻¹)

Cage distribution in animalerie

Female rats

cage 1 F S 1052 6 1057	cage 2 C S 1053 - 1076	cage 3 f S 1046 - 1047	cage 4 F S 1050 - 1071	cage 5 f S 1055 - 1073
cage 6 C S 1065 - 1069	cage 7 C S 1062 - 1075	cage 8 F S 1059 - 1067	cage 9 f S 1056 - 1064	cage 10 f S 1060 - 1068
cage 11 F S 1061 - 1063	cage 12 C S 1058 - 1074	cage 13 f S 1048 - 1072	cage 14 C S 1045 - 1054	cage 15 F S 1051 - 1066

rat S : n° BPL

C = controls

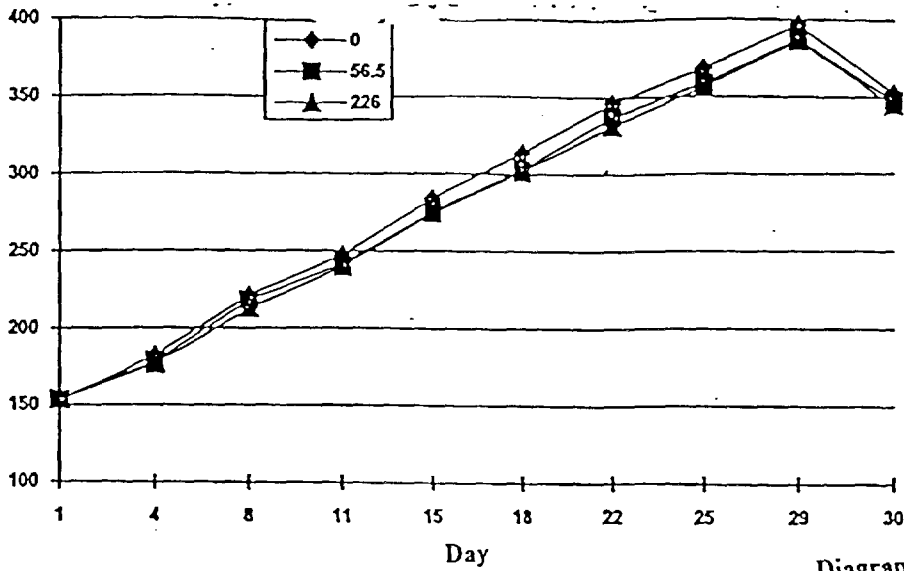
f = Pao V. ow dose (73.2 mg/kg⁻¹)

F = Pao V. high dose (292.8 mg/kg⁻¹)

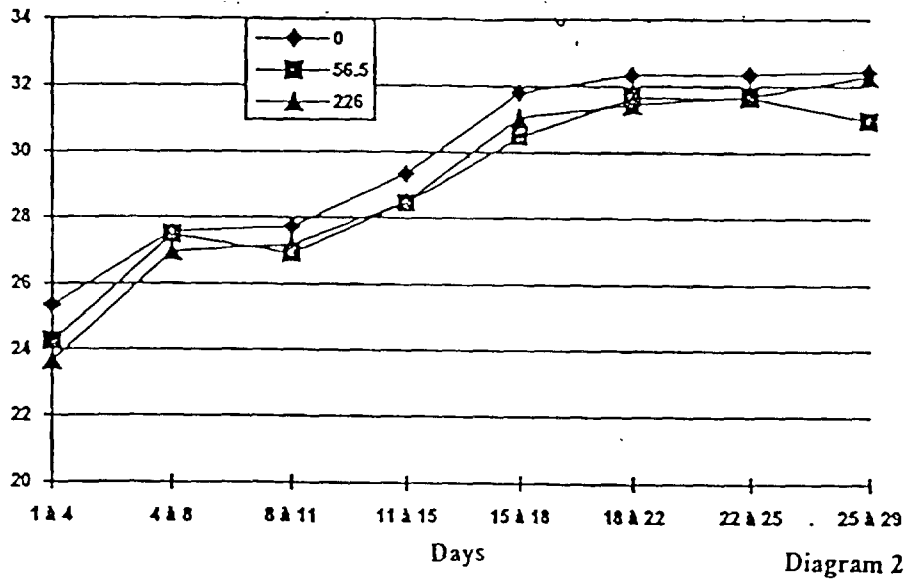
DIAGRAMS 1 to 8

MALE RAT

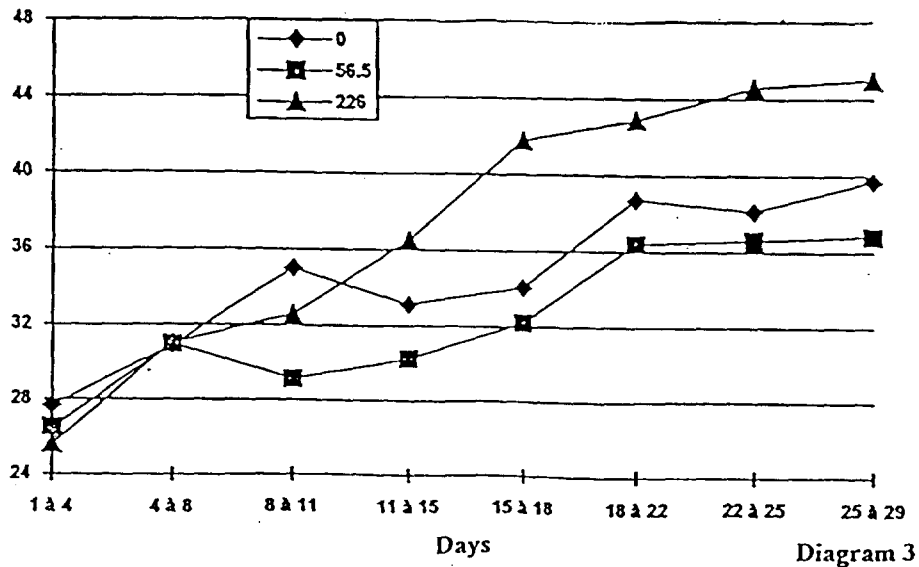
WEIGHT EVOLUTION (GRAMS)



FOOD INTAKE (g/d/rat)

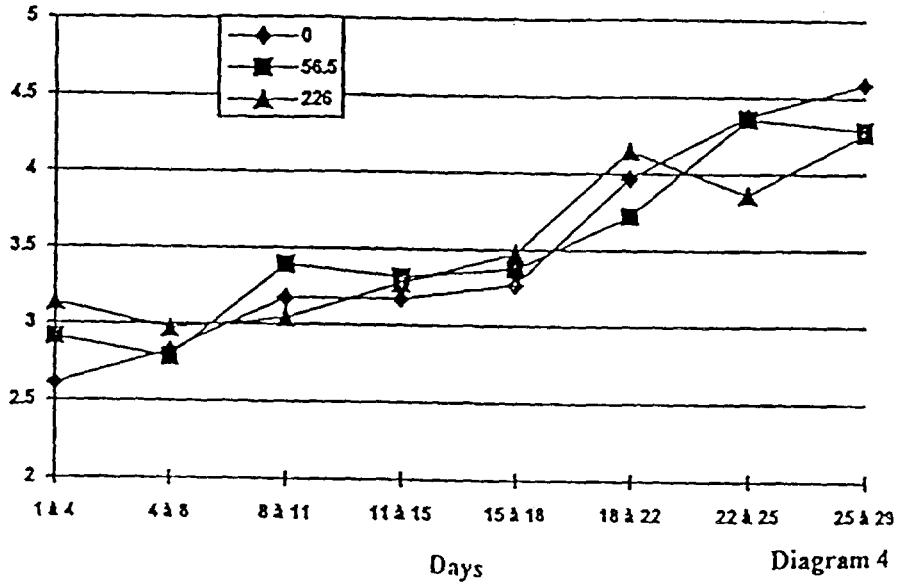


WATER INTAKE (ml/d/rat)



MALE RAT

NUTRITION EFFICACY COEFFICIENT



	1 à 4	4 à 8	8 à 11	11 à 15	15 à 18	18 à 22	22 à 25	25 à 29
0	2.614	2.827	3.174	3.172	3.267	3.968	4.373	4.585
56.5	2.911	2.783	3.393	3.317	3.372	3.722	4.357	4.285
226	3.141	2.973	3.043	3.276	3.477	4.150	3.863	4.264

FEMALE RAT

NUTRITION EFFICACY COEFFICIENT

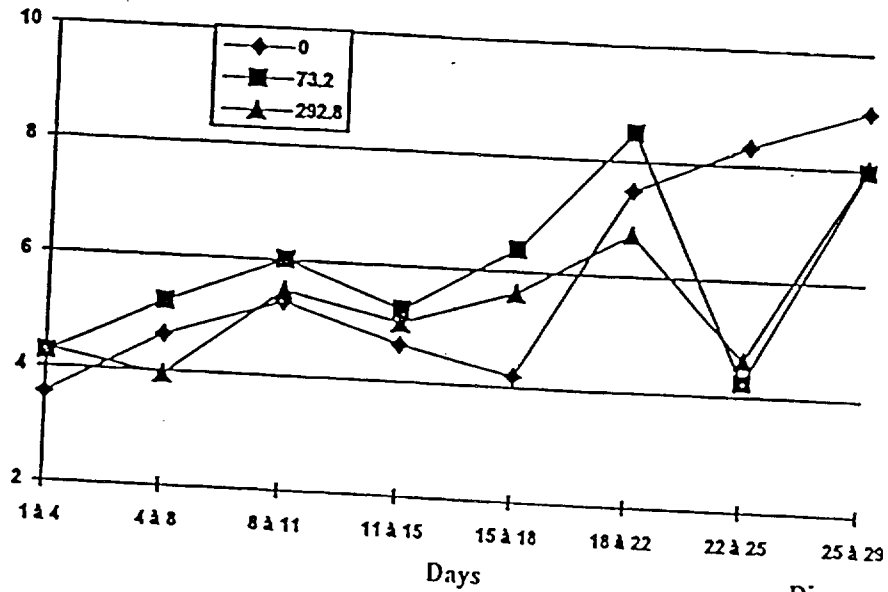


Diagram 8

	1 à 4	4 à 8	8 à 11	11 à 15	15 à 18	18 à 22	22 à 25	25 à 29
0	3.555	4.631	5.280	4.639	4.192	7.492	8.325	8.985
73.2	4.256	5.208	6.013	5.246	6.385	8.496	4.239	7.969
292.8	4.322	3.945	5.480	5.014	5.627	6.724	4.622	8.031

MALE RATS

TABLES 1 to 33

Pao V. TOXICOLOGIC ORIENTATION ASSAY
MALE RAT : WEIGHT EVOLUTION

RECAPITULATION : MEAN, ERROR AND STANDARD DEVIATION, VARIANCE

D 1					
SERIES	N	MEAN	STANDARD ERROR	STANDARD DEVIATION	VARIANCE
CONTROLS:	10	153.1	2.25	7.13	50.7667
Pao V. 56.5	10	153.4	1.89	5.97	35.6000
Pao V. 226	10	153.9	1.96	6.19	38.3222

D 4					
SERIES	N	MEAN	STANDARD ERROR	STANDARD DEVIATION	VARIANCE
CONTROLS:	10	182.2	2.72	8.59	73.7333
Pao V. 56.5	10	178.4	2.48	7.83	61.3778
Pao V. 226	10	176.5	2.16	6.82	46.5000

D 8					
SERIES	N	MEAN	STANDARD ERROR	STANDARD DEVIATION	VARIANCE
CONTROLS:	10	221.2	3.12	9.86	97.2889
Pao V. 56.5	10	217.9	3.86	12.21	148.9889
Pao V. 226	10	212.8	3.21	10.15	103.0667

D 11					
SERIES	N	MEAN	STANDARD ERROR	STANDARD DEVIATION	VARIANCE
CONTROLS:	10	247.4	3.08	9.75	95.1556
Pao V. 56.5	10	241.7	4.63	14.65	214.6778
Pao V. 226	10	239.6	3.83	12.12	146.9333

D 15					
SERIES	N	MEAN	STANDARD ERROR	STANDARD DEVIATION	VARIANCE
CONTROLS:	10	284.4	3.28	10.36	107.3778
Pao V. 56.5	10	276.0	5.57	17.61	310.0000
Pao V. 226	10	274.4	4.92	15.54	241.6000

D 18					
SERIES	N	MEAN	STANDARD ERROR	STANDARD DEVIATION	VARIANCE
CONTROLS:	10	313.6	3.87	12.25	150.0444
Pao V. 56.5	10	303.1	6.13	19.39	375.8778
Pao V. 226	10	301.2	5.97	18.89	356.8444

Pao V. TOXICOLOGIC ORIENTATION ASSAY
MALE RAT : WEIGHT EVOLUTION

RECAPITULATION : MEAN, ERROR AND STANDARD DEVIATION, VARIANCE

D 22					
SERIES	N	MEAN	STANDARD ERROR	STANDARD DEVIATION	VARIANCE
CONTROLS:	10	346.2	4.19	13.26	175.9556
Pao V. 56.5	10	337.1	7.67	24.27	588.9889
Pao V. 226	10	331.5	8.11	25.66	658.5000

D 25					
SERIES	N	MEAN	STANDARD ERROR	STANDARD DEVIATION	VARIANCE
CONTROLS:	10	368.4	5.34	16.89	285.1556
Pao V. 56.5	10	358.9	8.09	25.58	654.5444
Pao V. 226	10	356.1	9.68	30.61	937.2111

D 29					
SERIES	N	MEAN	STANDARD ERROR	STANDARD DEVIATION	VARIANCE
CONTROLS:	10	396.7	6.43	20.34	413.7889
Pao V: 56.5	10	387.8	9.06	28.64	820.1778
Pao V: 226	10	386.4	11.14	35.21	1240.0444

D 30					
SERIES	N	MEAN	STANDARD ERROR	STANDARD DEVIATION	VARIANCE
CONTROLS:	10	353.1	5.94	18.77	352.3222
Pao V : 56.5	10	348.0	8.07	25.51	650.6667
Pao V : 226	10	344.5	9.42	29.77	886.5000

D 29 - D 1					
SERIES	N	MEAN	STANDARD ERROR	STANDARD DEVIATION	VARIANCE
CONTROLS:	10	243.6	6.40	20.25	410.0444
Pao V 56.5	10	234.4	7.76	34.55	602.4889
Pao V. 226	10	232.5	10.74	33.97	1153.8333

*Pao V TOXICOLOGIC ORIENTATION ASSAY**MALE RAT : WEIGHT EVOLUTION*

COMPARED SERIES

SERIES 1 : Controls

SERIES 2 : Pao V. : 56.5

SERIES 3 : Pao V. : 226

VARIABLE	COMPARED VARIANCES (BARTLETT'S TEST)				COMPARED MEANS				
	ddl	Chi2	P	Sig	Test	ddl		P	Sig
D 1	2	0.309	0.8569	NS	AOV	2. 27	F= 0.039	.9614	NS
D 4	2	0.453	0.7973	NS	AOV	2. 27	F= 1.391	.2660	NS
D 8	2	0.475	0.7889	NS	AOV	2. 27	F= 1.538	.2331	NS
D 11	2	1.390	0.4991	NS	AOV	2. 27	F= 1.070	.3571	NS
D 15	2	2.367	0.3062	NS	AOV	2. 27	F= 1.314	.2855	NS
D 18	2	2.023	0.3637	NS	AOV	2. 27	F= 1.516	.2377	NS
D 22	2	3.843	0.1464	NS	AOV	2. 27	F= 1.160	.3286	NS
D 25	2	2.885	0.2363	NS	AOV	2. 27	F= 0.664	.5228	NS
D 29	2	2.463	0.2919	NS	AOV	2. 27	F= 0.379	.6885	NS
D 30	2	1.771	0.4125	NS	AOV	2. 27	F= 0.297	.7455	NS
D 29 - D 1	2	2.388	0.3030	NS	AOV	2. 27	F= 0.488	.6191	NS

Table 3

Pao V. TOXICOLOGIC ORIENTATION ASSAY
MALE RAT : WEIGHT EVOLUTION

RECAPITULATION : MEAN, ERROR AND STANDARD DEVIATION, VARIANCE

D 1 to D 4					
SERIES	N	MEAN	STANDARD ERROR	STANDARD DEVIATION	VARIANCE
CONTROLS:	10	29.1	1.00	3.18	10.1000
Pao V. 56.5	10	25.0	1.14	3.59	12.8889
Pao V. 226	10	22.6	1.10	3.47	12.0444

D 4 to D 8					
SERIES	N	MEAN	STANDARD ERROR	STANDARD DEVIATION	VARIANCE
CONTROLS:	10	39.0	1.18	3.74	14.0000
Pao V: 56.5	10	39.5	1.53	4.84	23.3889
Pao V: 226	10	36.3	1.47	4.64	21.5667

D 8 to D 11					
SERIES	N	MEAN	STANDARD ERROR	STANDARD DEVIATION	VARIANCE
CONTROLS:	10	26.2	1.07	3.39	11.5111
Pao V: 56.5	10	23.8	1.14	3.61	13.0667
Pao V. 226	10	26.8	1.05	3.33	11.0667

D 11 to D 15					
SERIES	N	MEAN	STANDARD ERROR	STANDARD DEVIATION	VARIANCE
CONTROLS:	10	37.0	1.47	4.64	21.5556
Pao V. 56.5	10	34.3	1.28	4.06	16.4556
Pao V. 226	10	34.8	1.49	4.71	22.1778

D 15 to D 18					
SERIES	N	MEAN	STANDARD ERROR	STANDARD DEVIATION	VARIANCE
CONTROLS:	10	29.2	1.61	5.09	25.9556
Pao V: 56.5	10	27.1	0.99	3.14	9.8778
Pao V: 226	10	26.8	1.13	3.58	12.8444

D 18 to D 22					
SERIES	N	MEAN	STANDARD ERROR	STANDARD DEVIATION	VARIANCE
CONTROLS:	10	32.6	1.62	5.13	26.2667
Pao V: 56.5	10	34.0	2.20	6.94	48.2222
Pao V.: 226	10	30.3	2.48	7.83	61.3444

Pao V. TOXICOLOGIC ORIENTATION ASSAY
MALE RAT : WEIGHT EVOLUTION

RECAPITULATION : MEAN, ERROR AND STANDARD DEVIATION, VARIANCE

D 22 to D 25					
SERIES	N	MEAN	STANDARD ERROR	STANDARD DEVIATION	VARIANCE
CONTROLS:	10	22.2	1.82	5.75	33.0667
Pao V:56.5	10	21.8	1.32	4.18	14.5111
Pao V:226	10	24.6	2.41	7.62	58.0444

D 25 to D 29					
SERIES	N	MEAN	STANDARD ERROR	STANDARD DEVIATION	VARIANCE
CONTROLS:	10	28.3	3.13	9.90	98.0111
Pao V:56.5	10	28.9	2.06	6.51	42.3222
Pao V:226	10	30.3	1.73	5.48	30.0111

Pao V. TOXICOLOGIC ORIENTATION ASSAY
MALE RAT : FOOD INTAKE (g/d/rat)

RECAPITULATION : MEAN, ERROR AND STANDARD DEVIATION, VARIANCE

D 1 to D 4					
SERIES	N	MEAN	STANDARD ERROR	STANDARD DEVIATION	VARIANCE
CONTROLS:	10	25.36	0.623	1.394	1.9430
Pao V. 56.5	10	24.26	0.601	1.345	1.8080
Pao V. 226	10	23.66	0.430	0.961	0.9230

D 4 to D 8					
SERIES	N	MEAN	STANDARD ERROR	STANDARD DEVIATION	VARIANCE
CONTROLS:	10	27.56	0.296	0.662	0.4380
Pao V. 56.5	10	27.48	0.978	2.188	4.7870
Pao V. 226	10	26.98	0.661	1.479	2.1870

D 8 to D11					
SERIES	N	MEAN	STANDARD ERROR	STANDARD DEVIATION	VARIANCE
CONTROLS:	10	27.72	0.331	0.740	0.5470
Pao V. 56.5	10	26.92	0.896	2.003	4.0120
Pao V. 226	10	27.18	0.764	1.708	2.9170

D 11 to D 15					
SERIES	N	MEAN	STANDARD ERROR	STANDARD DEVIATION	VARIANCE
CONTROLS:	10	29.34	0.234	0.522	0.2730
Pao V.56.5	10	28.44	0.991	2.217	4.9130
Pao V.226	10	28.50	0.787	1.759	3.0950

D 15 to D 18					
SERIES	N	MEAN	STANDARD ERROR	STANDARD DEVIATION	VARIANCE
CONTROLS:	10	31.80	0.416	0.930	0.8650
Pao V. 56.5	10	30.46	0.939	2.100	4.4080
Pao V. 226	10	31.06	0.740	1.655	2.7380

D 18 to D 22					
SERIES	N	MEAN	STANDARD ERROR	STANDARD DEVIATION	VARIANCE
CONTROLS:	10	32.34	0.511	1.144	1.3080
Pao V; 56.5	10	31.64	1.267	2.832	8.0230
Pao V; 226	10	31.44	1.225	2.738	7.4980

*Pao V. TOXICOLOGIC ORIENTATION ASSAY**MALE RAT : FOOD INTAKE (g/d/rat)*

RECAPITULATION : MEAN, ERROR AND STANDARD DEVIATION, VARIANCE

D 22 to D 25					
SERIES	N	MEAN	STANDARD ERROR	STANDARD DEVIATION	VARIANCE
CONTROLS:	10	32.36	0.929	2.078	4.3180
Pao V : 56.5	10	31.66	1.219	2.726	7.4330
Pao V : 226	10	31.68	1.643	3.673	13.4920

D 25 to D 29					
SERIES	N	MEAN	STANDARD ERROR	STANDARD DEVIATION	VARIANCE
CONTROLS:	10	32.44	0.650	1.454	2.1130
Pao V : 56.5	10	30.96	1.055	2.359	5.5630
Pao V : 226	10	32.30	1.428	3.193	10.1950

*Pao V. TOXICOLOGIC ORIENTATION ASSAY**MALE RAT : FOOD INTAKE (g/d/rat)*

COMPARED SERIES

SERIES 1 : Controls

SERIES 2 : Pao V.: 56.5

SERIES 3 : Pao V.: 226

VARIABLE	COMPARED VARIANCES (BARTLETT'S TEST)				COMPARED MEANS				
	ddl	Chi2	P	Sig	Test	ddl		P	Sig
D 1 to D 4	2	0.554	07580	NS	AOV	2. 12	F= 2.385	0.1342	NS
D 4 to D 8	2	4.286	0.1173	NS	AOV	2. 12	F= 0.200	.8218	NS
D 8 to D 11	2	3.179	0.2041	NS	AOV	2. 12	F= 0.334	.7224	NS
D 11 to D 15	2	5.841	0.0539	NS	AOV	2. 12	F= 0.459	.6428	NS
D 15 to D 18	2	2.163	0.3390	NS	AOV	2. 12	F= 0.844	.4540	NS
D 18 to D 22	2	2.909	0.2335	NS	AOV	2. 12	F= 0.199	.8220	NS
D 22 to D 25	2	1.148	0.5631	NS	AOV	2. 12	F= 0.094	.9107	NS
D 25 to D 29	2	2.043	0.3600	NS	AOV	2. 12	F= 0.560	.5852	NS

Pao V. TOXICOLOGIC ORIENTATION ASSAY

MALE RAT : WATER INTAKE (ml/d/rat)

RECAPITULATION : MEAN, ERROR AND STANDARD DEVIATION, VARIANCE

D 1 to D 4					
SERIES	N	MEAN	STANDARD ERROR	STANDARD DEVIATION	VARIANCE
CONTROLS:	5	27.66	0.488	1.092	1.1930
Pao V. 56.5	5	26.50	1.037	2.318	5.3750
Pao V. 226	5	25.62	1.245	2.783	7.7470

D 4 to D 8					
SERIES	N	MEAN	STANDARD ERROR	STANDARD DEVIATION	VARIANCE
CONTROLS:	5	30.90	0.341	0.762	0.5800
Pao V. 56.5	5	30.98	1.683	3.764	14.1670
Pao V. 226	5	31.04	1.795	4.013	16.1030

D 8 to D 11					
SERIES	N	MEAN	STANDARD ERROR	STANDARD DEVIATION	VARIANCE
CONTROLS:	5	35.00	2.309	5.164	26.6650
Pao V. 56.5	5	29.12	1.557	3.482	12.1220
Pao V. 226	5	32.58	2.548	5.697	32.4570

D 11 to D 15					
SERIES	N	MEAN	STANDARD ERROR	STANDARD DEVIATION	VARIANCE
CONTROLS:	5	33.12	1.068	2.389	5.7070
Pao V. 56.5	5	30.20	2.950	6.597	43.5200
Pao V. 226	5	36.52	3.600	8.049	64.7920

D 15 to D 18					
SERIES	N	MEAN	STANDARD ERROR	STANDARD DEVIATION	VARIANCE
CONTROLS:	5	34.06	0.994	2.222	4.9380
Pao V. 56.5	5	32.22	1.439	3.217	10.340
Pao V. 226	5	41.78	3.302	7.384	54.5170

D 18 to D 22					
SERIES	N	MEAN	STANDARD ERROR	STANDARD DEVIATION	VARIANCE
CONTROLS:	5	38.72	2.011	4.497	20.2220
Pao V. 56.5	5	36.40	1.901	4.250	18.0650
Pao V. 226	5	42.88	5.298	11.846	140.3370

Pao V. TOXICOLOGIC ORIENTATION ASSAY
MALE RAT : WATER INTAKE (ml/d/rat)

RECAPITULATION : MEAN, ERROR AND STANDARD DEVIATION, VARIANCE

D 22 to D 25					
SERIES	N	MEAN	STANDARD ERROR	STANDARD DEVIATION	VARIANCE
CONTROLS:	5	38.14	1.913	4.277	18.2930
Pao V. 56.5	5	36.62	4.847	10.838	117.4720
Pao V. 226	5	44.60	3.719	8.315	69.1450

D 25 to D 29					
SERIES	N	MEAN	STANDARD ERROR	STANDARD DEVIATION	VARIANCE
CONTROLS:	5	39.72	2.421	5.415	29.3170
Pao V. 56.5	5	36.84	2.560	5.725	32.7730
Pao V. 226	5	45.00	3.322	7.428	55.1800

*Pao V. TOXICOLOGIC ORIENTATION ASSAY**MALE RAT : WATER INTAKE (ml/d/rat)*

COMPARED SERIES

SERIES 1 : Controls

SERIES 2 : Pao V. : 56.5

SERIES 3 : Pao V. : 226

VARIABLE	COMPARED VARIANCES (BARTLETT'S TEST)				COMPARED MEANS				
	ddl	Chi2	P	Sig	Test	ddl		P	Sig
D 1 to D 4	2	2.817	0.2445	NS	AOV	2. 12	F= 1.097	.3651	NS
D 4 to D 8	2	7.584	0.0226	S	K-W	2	X2= 0.04	.9827	NS
D 8 to D 11	2	0.879	0.6443	NS	AOV	2. 12	F= 1.839	.2011	NS
D 11 to D 15	2	4.418	0.1098	NS	AOV	2. 12	F= 1.316	.3042	NS
D 15 to D 18	2	5.432	0.0661	NS	AOV	2. 12	F= 5.529	.0199	S
D 18 to D 22	2	5.095	0.0783	NS	AOV	2. 12	F= 0.905	.4304	NS
D 22 to D 25	2	2.747	0.2533	NS	AOV	2. 12	F= 1.314	.3047	NS
D 25 to D 29	2	0.429	0.8069	NS	AOV	2. 12	F= 2.191	.1545	NS

MALE RAT

----- STUDENT - NEWMAN - KEULS -----

D 15 - D 18 WATER INTAKE VARIABLE PER SERIES VARIABLE

Classification test : Student - Newman - Keuls with significance level .050

Difference between two means is significant if

$$\text{MEAN (J)} - \text{MEAN (I)} \geq 3.4108 * \text{RANGE} * \text{SQRT} (1/\text{N (I)} + 1/\text{N (J)})$$

with the following range value :

Steep	2	3
RANGE	3.08	3.77

* indicates significant differences

triangle

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MEAN	SERIES
32.2200	Pao V.: 56.5
34.0600	Controls
41.7800	Pao V.: 226

Subset 1		
Group	Pao V.: 56.5	Controls
mean	32.2200	34.0600

Subset 2	
Group	Pao V.: 226
mean	41.7800

*Pao V. TOXICOLOGIC ORIENTATION ASSAY**MALE RAT : WATER / FOOD RATIO*

RECAPITULATION : MEAN, ERROR AND STANDARD DEVIATION, VARIANCE

D 1 to D 4					
SERIES	N	MEAN	STANDARD ERROR	STANDARD DEVIATION	VARIANCE
CONTROLS:	5	1.093	0.0331	0.0741	0.0055
Pao V. 56.5	5	1.092	0.0287	0.0642	0.0041
Pao V. 226	5	1.082	1.0406	0.0909	0.0083

D 4 to D 8					
SERIES	N	MEAN	STANDARD ERROR	STANDARD DEVIATION	VARIANCE
CONTROLS:	5	1.121	0.0122	0.0274	0.0007
Pao V. 56.5	5	1.125	0.0229	0.0512	0.0026
Pao V. 226	5	1.150	0.0588	0.1315	0.0173

D 8 to D 11					
SERIES	N	MEAN	STANDARD ERROR	STANDARD DEVIATION	VARIANCE
CONTROLS:	5	1.264	0.0877	0.1961	0.0384
Pao V.: 56.5	5	1.080	0.0314	0.0703	0.0049
Pao V.: 226	5	1.193	0.0658	0.1471	0.0216

D 11 to D 15					
SERIES	N	MEAN	STANDARD ERROR	STANDARD DEVIATION	VARIANCE
CONTROLS:	5	1.130	0.0423	0.0947	0.0090
Pao V.: 56.5	5	1.057	0.0748	0.1672	0.0280
Pao V.: 226	5	1.276	0.1087	0.2431	0.0591

D 15 to D 18					
SERIES	N	MEAN	STANDARD ERROR	STANDARD DEVIATION	VARIANCE
CONTROLS:	5	1.071	0.0254	0.0568	0.0032
Pao V.: 56.5	5	1.056	0.0191	0.0428	0.0018
Pao V.: 226	5	1.340	0.0824	0.1842	0.0339

D 18 to D 22					
SERIES	N	MEAN	STANDARD ERROR	STANDARD DEVIATION	VARIANCE
CONTROLS:	5	1.196	0.0519	0.1161	0.0135
Pao V.: 56.5	5	1.150	0.0327	0.0731	0.0053
Pao V.: 226	5	1.357	0.1414	0.3161	0.0999

Pao V. TOXICOLOGIC ORIENTATION ASSAY
MALE RAT : WATER / FOOD RATIO

RECAPITULATION : MEAN, ERROR AND STANDARD DEVIATION, VARIANCE

D 22 to D 25					
SERIES	N	MEAN	STANDARD ERROR	STANDARD DEVIATION	VARIANCE
CONTROLS:	5	1.186	0.0832	0.1860	0.0346
Pao V. 56.5	5	1.145	0.1106	0.2473	0.0612
Pao V. 226	5	1.408	0.0926	0.2071	0.0429

D 25 to D 29					
SERIES	N	MEAN	STANDARD ERROR	STANDARD DEVIATION	VARIANCE
CONTROLS:	5	1.225	0.0726	0.1623	0.0263
Pao V.: 56.5	5	1.188	0.0596	0.1332	0.0178
Pao V.: 226	5	1.390	0.0734	0.1642	0.0270

*Pao V. TOXICOLOGIC ORIENTATION ASSAY**MALE RAT : WATER / FOOD RATIO***COMPARED SERIES**

SERIES 1 : Controls

SERIES 2 : Pao V.: 56.5

SERIES 3 : Pao V.: 226

VARIABLE	COMPARED VARIANCES (BARTLETT'S TEST)				COMPARED MEANS				
	ddl	Chi2	P	Sig	Test	ddl		P	Sig
D 1 to D 4	2	0.445	0.8006	NS	AOV	2. 12	F= 0.033	.9675	NS
D 4 to D 8	2	8.147	0.0170	S	K-W	2	X2= 0.02	.9900	NS
D 8 to D 11	2	3.269	0.1951	NS	AOV	2. 12	F= 1.994	.1788	NS
D 11 to D 15	2	2.862	0.2391	NS	AOV	2. 12	F= 1.955	.1841	NS
D 15 to D 18	2	8.619	0.0134	S	K-W	2	X2= 9.50	.0087	S
D 18 to D 22	2	7.758	0.0207	S	K-W	2	X2= 2.06	.3570	NS
D 22 to D 25	2	0.303	0.8595	NS	AOV	2. 12	F= 2.157	.1584	NS
D 25 to D 29	2	0.189	0.9100	NS	AOV	2. 12	F= 2.445	.1286	NS

*Pao V, TOXICOLOGIC ORIENTATION ASSAY**MALE RAT : WATER / FOOD RATIO*

COMPARISON OF TWO INDEPENDENT SERIES : MANN-WHITNEY U TEST

Variable	controls		Pao V.: 56.5		U	Z	Prob 2b S to P \leq .050
	N	MEDIAN	N	MEDIAN			
D 15 to D 18	5	1.0948	5	1.0426	10	0.5197	0.6033 NS

Variable	controls		Pao V. : 226		U	Z	Prob 2b S to P \leq .050
	N	MEDIAN	N	MEDIAN			
D 15 to D 18	5	1.0948	5	1.2839	0	- 2.5986	0.0094 S

Pao V. TOXICOLOGIC ORIENTATION ASSAY
MALE RAT : HEMATOLOGY

RECAPITULATION : MEAN, ERROR AND STANDARD DEVIATION, VARIANCE

ERYTHROCYTES					
SERIES	N	MEAN	STANDARD ERROR	STANDARD DEVIATION	VARIANCE
CONTROLS:	10	7.03			
Pao V.: 56.5	10	7.10	0.089	0.280	0.0784
Pao V.: 226	10	7.05	0.111	0.350	0.1224
			0.132	0.418	0.1750

HEMOGLOBIN					
SERIES	N	MEAN	STANDARD ERROR	STANDARD DEVIATION	VARIANCE
CONTROLS:	10	10.2	0.13		
Pao V.: 56.5	10	10.5	0.16	0.42	0.1804
Pao V.: 226	10	9.9	0.13	0.49	0.2440
				0.40	0.1583

HEMATOCRIT					
SERIES	N	MEAN	STANDARD ERROR	STANDARD DEVIATION	VARIANCE
CONTROLS:	10	0.48	0.007		
Pao V.: 56.5	10	0.48	0.008	0.022	0.0005
Pao V.: 226	10	0.48	0.005	0.025	0.0006
				0.015	0.0002

M C V					
SERIES	N	MEAN	STANDARD ERROR	STANDARD DEVIATION	VARIANCE
CONTROLS:	10	68.99			
Pao V. 56.5	10	67.61	0.516	1.633	2.6662
Pao V. 226	10	67.95	0.314	0.992	0.9831
			0.895	2.830	8.0066

M C C					
SERIES	N	MEAN	STANDARD ERROR	STANDARD DEVIATION	VARIANCE
CONTROLS:	10	21.13			
Pao V. 56.5	10	21.86	0.212	0.669	0.4473
Pao V. 226	10	20.82	0.316	0.999	0.9980
			0.182	0.576	0.3323

LEUCOCYTES					
SERIES	N	MEAN	STANDARD ERROR	STANDARD DEVIATION	VARIANCE
CONTROLS:	10	12.552			
Pao V.: 56.5	10	10.470	0.8687	2.7470	7.5462
Pao V.: 226	10	11.216	0.5387	1.7037	2.9025
			0.5844	1.8481	3.4154

Pao V. TOXICOLOGIC ORIENTATION ASSAY
MALE RAT : HEMATOLOGY

RECAPITULATION : MEAN, ERROR AND STANDARD DEVIATION, VARIANCE

THROMBOCYTES					
SERIES	N	MEAN	STANDARD ERROR	STANDARD DEVIATION	VARIANCE
CONTROLS:	10	608			
Pao V. 56.5	10	569	84.7	267.7	71660.9889
Pao V. 226	10	556	81.6	257.9	66536.0111
			82.5	260.8	68039.7889

Pao V. TOXICOLOGIC ORIENTATION ASSAY
MALE RAT : HEMATOLOGY

COMPARED SERIES

SERIES 1 : Controls

SERIES 2 : Pao V. : 56.5

SERIES 3 : Pao V. : 226

VARIABLE	COMPARED VARIANCES (BARTLETT'S TEST)				COMPARED MEANS				
	ddl	Chi2	P	Sig	Test	ddl		P	Sig
Erythrocytes	2	1.349	0.5094	NS	AOV	2.27	F= 0.101	.9047	NS
Hemoglobin	2	0.431	0.8060	NS	AOV	2.27	F= 3.625	.0403	S
Hematocrit	2	1.900	0.3866	NS	AOV	2.27	F= 0.293	.7487	NS
MCV	2	8.816	0.0122	S	K-W	2	X2= 3.33	.1890	NS
MCC	2	2.900	0.2346	NS	AOV	2.27	F= 4.815	.0163	S
Leucocytes	2	2.377	0.3047	NS	AOV	2.27	F= 2.408	.1090	NS
Thrombocytes	2	0.012	0.9938	NS	AOV	2.27	F= 0.106	.8994	NS

MALE RAT

----- STUDENT - NEWMAN - KEULS -----

HEMOGLOBIN VARIABLE PER SERIES VARIABLE

Classification test : Student - Newman - Keuls with significance level .050

Difference between two means is significant if

$$\text{MEAN}(J) - \text{MEAN}(I) \geq .3117 * \text{RANGE} * \text{SQRT}(1/N(I) + 1/N(J))$$

with the following range value :

Steep	2	3
RANGE	2.90	3.50

* indicates significant differences

triangle

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MEAN	SERIES
9.9500	Pao V. 226
10.2400	Controls
10.4800	Pao V. 56.5

Subset 1		
Group	Pao V.: 226	Controls
mean	9.9500	10.2400

Subset 2		
Group	Controls	Pao V. 56.5
mean	10.2400	10.4800

MALE RAT

----- STUDENT - NEWMAN - KEULS -----

M C C VARIABLE PER SERIES VARIABLE

Classification test : Student - Newman - Keuls with significance level .050

Difference between two means is significant if

$$\text{MEAN (J)} - \text{MEAN (I)} \geq .5439 * \text{RANGE} * \text{SQRT} (1/\text{N (I)} + 1/\text{N (J)})$$

with the following range value :

Steep	2	3
RANGE	2.90	3.50

* indicates significant differences

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MEAN	SERIES
20.8170	Pao V. 226
21.1250	Controls
21.8580	Pao V. 56.5

Subset 1		
Group	Pao V 226	Controls
mean	20.8170	21.1250

Subset 2	
Group	Pao V. 56.5
mean	21.8580

Pao V: TOXICOLOGIC ORIENTATION ASSAY
MALE RAT : BIOCHEMICAL DATA

RECAPITULATION : MEAN, ERROR AND STANDARD DEVIATION, VARIANCE

CHOLESTER					
SERIES	N	MEAN	STANDARD ERROR	STANDARD DEVIATION	VARIANCE
CONTROLS:	10	2.59	0.086	0.271	0.0734
Pao V 56.5	10	2.67	0.148	0.468	0.2192
Pao V 226	10	3.03	0.318	1.006	1.0126

PROTEINS					
SERIES	N	MEAN	STANDARD ERROR	STANDARD DEVIATION	VARIANCE
CONTROLS:	10	67.4	1.14	3.62	13.1090
Pao V 56.5	10	68.1	0.91	2.88	8.2862
Pao V 226	10	68.5	1.00	3.16	9.9827

CALCIUM					
SERIES	N	MEAN	STANDARD ERROR	STANDARD DEVIATION	VARIANCE
CONTROLS:	10	2.83	0.027	0.085	0.0073
Pao V 56.5	10	2.84	0.035	0.110	0.0122
Pao V 226	10	2.80	0.026	0.083	0.0069

OSMOLARITY					
SERIES	N	MEAN	STANDARD ERROR	STANDARD DEVIATION	VARIANCE
CONTROLS:	10	1179	44.2	139.7	19521.1111
Pao V 56.5	10	1115	31.4	99.2	9844.4444
Pao V 226	10	1185	68.9	218.0	47513.6111

URIN CREAT.					
SERIES	N	MEAN	STANDARD ERROR	STANDARD DEVIATION	VARIANCE
CONTROLS:	10	8.6	0.44	1.41	1.9801
Pao V 56.5	10	8.8	0.61	1.92	3.6760
Pao V 226	10	8.2	0.62	1.95	3.7912

SERUM CREAT.					
SERIES	N	MEAN	STANDARD ERROR	STANDARD DEVIATION	VARIANCE
CONTROLS:	10	66.7	1.29	4.08	16.6716
Pao V 56.5	10	68.8	2.37	7.48	55.9828
Pao V 226	10	68.7	2.68	8.47	71.7538

Pao V. TOXICOLOGIC ORIENTATION ASSAY
MALE RAT : BIOCHEMICAL DATA

RECAPITULATION : MEAN, ERROR AND STANDARD DEVIATION, VARIANCE

CREAT. CLEAR					
SERIES	N	MEAN	STANDARD ERROR	STANDARD DEVIATION	VARIANCE
CONTROLS:	10	1.165	0.0633		
Pao V 56.5	10	1.287	0.1244	0.2003	0.0401
Pao V 226	10	1.098	0.0361	0.3933	0.1547
				0.1142	0.0130

UREA					
SERIES	N	MEAN	STANDARD ERROR	STANDARD DEVIATION	VARIANCE
CONTROLS:	10	6.45	0.301		
Pao V 56.5	10	5.98	0.186	0.951	0.9047
Pao V 226	10	6.07	0.337	0.588	0.3458
				1.066	1.1364

BILIRUBIN					
SERIES	N	MEAN	STANDARD ERROR	STANDARD DEVIATION	VARIANCE
CONTROLS:	10	8.67	0.695		
Pao V 56.5	10	7.81	0.462	2.197	4.8290
Pao V 226	10	7.56	0.590	1.459	2.1299
				1.866	3.4827

ALAT					
SERIES	N	MEAN	STANDARD ERROR	STANDARD DEVIATION	VARIANCE
CONTROLS:	10	84.2	5.11		
Pao V 56.5	10	79.9	3.73	16.16	261.0667
Pao V 226	10	101.3	3.13	11.80	139.2111
				9.91	98.2333

ASAT					
SERIES	N	MEAN	STANDARD ERROR	STANDARD DEVIATION	VARIANCE
CONTROLS:	10	26.5	2.08		
Pao V 56.5	10	26.3	1.14	6.59	43.3889
Pao V 226	10	26.1	1.09	3.59	12.9000
				3.45	11.8778

AL. PHOSPH					
SERIES	N	MEAN	STANDARD ERROR	STANDARD DEVIATION	VARIANCE
CONTROLS:	10	200	10.2		
Pao V.56.5	10	212	8.1	32.4	1050.4444
Pao V.226	10	176	15.7	25.7	658.7667
				49.8	2477.6556

Pao V. TOXICOLOGIC ORIENTATION ASSAY
MALE RAT : BIOCHEMICAL DATA

COMPARED SERIES

SERIES 1 : Controls

SERIES 2 : Pao V. 56.5

SERIES 3 : Pao V. 226

VARIABLE	COMPARED VARIANCES (BARTLETT'S TEST)				COMPARED MEANS				
	ddl	Chi2	P	Sig	Test	ddl		P	Sig
Cholester	2	13.896	0.0010	S	K-W	2	X2= 0.89	.6405	NS
Protcons	2	0.461	0.7941	NS	AOV	2. 27	F= 0.297	.7456	NS
Calcium	2	0.901	0.6374	NS	AOV	2. 27	F= 0.447	.6445	NS
Osmolarity	2	5.244	0.0727	NS	AOV	2. 27	F= 0.583	.5653	NS
Urin creat.	2	1.061	0.5884	NS	AOV	2. 27	F= 0.242	.7865	NS
Serum creat.	2	4.375	0.1122	NS	AOV	2. 27	F= 0.301	.7425	NS
Creat. clear	2	12.124	0.0023	S	K-W	2	X2= 2.86	.2394	NS
Urea	2	2.987	0.2246	NS	AOV	2. 27	F= 0.793	.4627	NS
Bilirubin	2	1.398	0.4970	NS	AOV	2. 27	F= 0.974	.3904	NS
ALAT	2	2.152	0.3409	NS	AOV	2. 27	F= 7.712	.0022	S
ASAT	2	4.871	0.0876	NS	AOV	2. 27	F= 0.018	.9826	NS
Al Phosph.	2	3.953	0.1386	NS	AOV	2. 27	F= 2.382	.1115	NS

MALE RAT

----- STUDENT - NEWMAN - KEULS -----

SGOT VARIABLE PER SERIES VARIABLE

Classification test : Student - Newman - Keuls with significance level .050

Difference between two means is significant if

$$\text{MEAN (J) - MEAN (I)} \geq 9.1151 * \text{RANGE} * \text{SQRT (1/N (I) + 1/N (J))}$$

with the following range value :

Step	2	3
RANGE	2.90	3.50

* indicates significant differences

triangle

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MEAN	SERIES
79.9000	Pao V 56.5
84.2000	Controls
101.3000	Pao V 226 **

Subset 1	Pao V 56.5	Controls
Group mean	79.9000	84.2000

Subset 2	Pao V 226
Group mean	101.3000

Pao V. TOXICOLOGIC ORIENTATION ASSAY
MALE RAT : URINE EXCRETION

RECAPITULATION : MEAN, ERROR AND STANDARD DEVIATION, VARIANCE

EXC. VOL. 7 H					
SERIES	N	MEAN	STANDARD ERROR	STANDARD DEVIATION	VARIANCE
CONTROLS:	10	13.6	0.95	3.02	9.1112
Pao V 56.5	10	12.3	0.58	1.83	3.3622
Pao V 226	10	12.7	0.85	2.70	7.2893

% EXC. 7 H					
SERIES	N	MEAN	STANDARD ERROR	STANDARD DEVIATION	VARIANCE
CONTROLS:	10	113.75	7.393	23.379	546.5827
Pao V 56.5	10	105.86	4.580	14.483	209.7716
Pao V 226	10	109.79	6.558	20.740	430.1322

VOL 7 - 24 H					
SERIES	N	MEAN	STANDARD ERROR	STANDARD DEVIATION	VARIANCE
CONTROLS:	10	9.3	0.49	1.55	2.4004
Pao V 56.5	10	10.2	0.50	1.57	2.4516
Pao V 226	10	9.7	0.72	2.26	5.1129

EXC. VOL. 24 H					
SERIES	N	MEAN	STANDARD ERROR	STANDARD DEVIATION	VARIANCE
CONTROLS:	10	22.9	1.00	3.15	9.9077
Pao V 56.5	10	22.5	0.74	2.35	5.5027
Pao V. 226	10	22.5	1.27	4.00	16.0093

pH					
SERIES	N	MEAN	STANDARD ERROR	STANDARD DEVIATION	VARIANCE
CONTROLS:	10	7.05	0.117	0.369	0.1361
Pao V 56.5	10	7.00	0.167	0.527	0.2778
Pao V 226	10	6.35	0.130	0.412	0.1694

Pao V. TOXICOLOGIC ORIENTATION ASSAY
MALE RAT : URINE EXCRETION

COMPARED SERIES

SERIES 1 : Controls

SERIES 2 : Pao V: 56.5

SERIES 3 : Pao V: 226

VARIABLE	COMPARED VARIANCES (BARTLETT'S TEST)				COMPARED MEANS				
	ddl	Chi2	P	Sig	Test	ddl		P	Sig
Exc. Vol 7 h	2	2.119	0.3467	NS	AOV	2.27	F= 0.631	.5396	NS
% exc. 7 h	2	1.944	0.3784	NS	AOV	2.27	F= 0.394	.6785	NS
vol. 7-24 h	2	1.692	0.4292	NS	AOV	2.27	F= 0.724	.4941	NS
Exc. vol. 24 h	2	2.356	0.3078	NS	AOV	2.27	F= 0.050	.9514	NS
pH	2	1.180	0.5542	NS	AOV	2.27	F= 7.843	.0021	S

-----STUDENT - NEWMAN - KEULS-----

PH VARIABLE PER SERIES VARIABLE

Classification test : Student - Newman - Keuls with significance level .050

Difference between two means is significant if

$$\text{MEAN (J) - MEAN (I)} \geq 3.118 * \text{RANGE} * \text{SQRT (1/N (I) + 1/N (J))}$$

with the following range value :

Steep	2	3
RANGE	2.90	3.50

* indicates significant differences

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MEAN	SERIES
6.3500	Pao V 56.5
7.0000	Controls *
7.0500	PB : 226 *

Subset 1	
Group	Pao V 226
mean	6.3500

Subset 2		
Group	Pao V 56.5	Controls
mean	7.0000	7.0500

QUALITATIVE URINE ANALYSIS (REAGENT STRIPS)

MALE RAT

	PROTEINS	GLUCOSE	KETONE COMPOUNDS	SANG BLOOD	HEMOGLOBIN
CONTROLS					
1 S 1093	0.3	-	+	-	10
2 S 1097	-	-	+	-	10
3 S 1099	-	-	-	-	-
4 S 1102	0.3	-	-	50	-
5 S 1078	-	-	+	-	-
6 S 1080	-	-	+	-	-
7 S 1103	-	-	-	5-10	-
8 S 1108	0.3	-	+	50	-
9 S 1086	0.3	-	+	-	-
10 S 1098	0.3	-	+	50	-
Pao V 56.5 mg.kg ⁻¹					
1 S 1087	0.3	-	+	5-10	-
2 S 1091	-	-	-	5-10	-
3 S 1085	0.3	-	+	-	-
4 S 1101	-	-	+	-	10
5 S 1088	-	-	-	-	-
6 S 1105	-	-	+	-	-
7 S 1092	-	-	-	-	-
8 S 1106	-	-	-	-	-
9 S 1083	-	-	+	-	-
10 S 1089	-	-	+	-	-
Pao V 226 mg.kg ⁻¹					
1 S 1090	-	-	-	-	-
2 S 1095	0.3	-	-	-	-
3 S 1096	0.3	-	+	5-10	-
4 S 1107	-	-	+	-	-
5 S 1100	-	-	-	-	-
6 S 1104	-	-	+	-	-
7 S 1079	0.3	-	+	-	-
8 S 1082	-	-	-	-	-
9 S 1077	-	-	-	-	-
10 S 1084	-	-	+	-	-

Table 29

*Pao V. TOXICOLOGIC ORIENTATION ASSAY**MALE RAT : ORGAN WEIGHT*

RECAPITULATION : MEAN, ERROR AND STANDARD DEVIATION, VARIANCE

KIDNEY					
SERIES	N	MEAN	STANDARD ERROR	STANDARD DEVIATION	VARIANCE
CONTROLS:	10	2.915	0.0633	0.2001	0.0400
Pao V: 56.5	10	2.761	0.0871	0.2756	0.0759
Pao V: 226	10	2.810	0.0903	0.2854	0.0815

ADRENALS					
SERIES	N	MEAN	STANDARD ERROR	STANDARD DEVIATION	VARIANCE
CONTROLS:	10	70.20	3.803	12.026	144.6222
Pao V: 56.5	10	66.00	3.386	10.708	114.6667
Pao V: 226	10	67.70	2.937	9.286	86.2333

THYMUS					
SERIES	N	MEAN	STANDARD ERROR	STANDARD DEVIATION	VARIANCE
CONTROLS:	10	814.2	27.58	87.23	7609.0667
Pao V: 56.5	10	828.4	36.25	114.63	13140.7111
Pao V: 226	10	746.4	58.36	184.56	34062.4889

BRAIN					
SERIES	N	MEAN	STANDARD ERROR	STANDARD DEVIATION	VARIANCE
CONTROLS:	10	1.465	0.0168	0.0532	0.0028
Pao V: 56.5	10	1.481	0.0253	0.0801	0.0064
Pao V: 226	10	1.398	0.0449	0.1419	0.0201

LIVER					
SERIES	N	MEAN	STANDARD ERROR	STANDARD DEVIATION	VARIANCE
CONTROLS:	10	12.04	0.309	0.976	0.9532
Pao V: 56.5	10	11.15	0.340	1.076	1.1583
Pao V: 226	10	12.36	0.482	1.525	2.3257

HEART					
SERIES	N	MEAN	STANDARD ERROR	STANDARD DEVIATION	VARIANCE
CONTROLS:	10	1.194	0.0226	0.0713	0.0051
Pao V: 56.5	10	1.130	0.0273	0.0862	0.0074
Pao V: 226	10	1.112	0.0284	0.0899	0.0081

MALE RAT

COVARIANCE ANALYSIS

PER SERIES

VERSUS BODY WEIGHT ON D 30

KIDNEYS

SOURCE OF VARIATION	SUM OF SQUARES	DDL	ESTIMATED VARIANCE	F	SIGNIF. OF F
Covariate : weight, D 30	0.439	1	0.439	8.528	0.007
Series	0.081	2	0.041	0.791	0.464
Explained	0.563	3	0.188	3.643	0.026
Residual	1.338	26	0.051		
Total	1.901	29	0.066		

ADRENALS

SOURCE OF VARIATION	SUM OF SQUARES	DDL	ESTIMATED VARIANCE	F	SIGNIF. OF F
Covariate : weight, D 30	4.077	1	4.077	0.034	0.855
Series	84.747	2	42.373	0.355	0.705
Explained	93.343	3	31.114	0.260	0.853
Residual	3105.623	26	119.447		
Total	3198.967	29	110.309		

THYMUS

SOURCE OF VARIATION	SUM OF SQUARES	DDL	ESTIMATED VARIANCE	F	SIGNIF. OF F
Covariate : weight, D 30	82059.569	1	82059.569	5.188	0.031
Series	28337.647	2	14168.823	0.896	0.421
Explained	120467.836	3	40155.945	2.539	0.078
Residual	411250.831	26	15817.340		
Total	531718.667	29	18335.126		

MALE RAT

COVARIANCE ANALYSIS
PER SERIES
VERSUS BODY WEIGHT ON D 30

BRAIN

SOURCE OF VARIATION	SUM OF SQUARES	DDL	ESTIMATED VARIANCE	F	SIGNIF. OF F
Covariate : weight, D 30	0.001	1	0.001	0.095	0.761
Series	0.037	2	0.18	1.820	0.182
Explained	0.039	3	0.13	1.297	0.296
Residual	0.264	26	0.10		
Total	0.303	29	0.10		

LIVER

SOURCE OF VARIATION	SUM OF SQUARES	DDL	ESTIMATED VARIANCE	F	SIGNIF. OF F
Covariate : weight, D 30	22.082	1	22.082	32.160	0.000
Series	8.887	2	4.444	6.472	0.005
Explained	29.915	3	9.972	14.523	0.000
Residual	17.852	26	0.687		
Total	47.767	29	1.647		

HEART

SOURCE OF VARIATION	SUM OF SQUARES	DDL	ESTIMATED VARIANCE	F	SIGNIF. OF F
Covariate : weight, D 30	0.041	1	0.041	7.373	0.012
Series	0.026	2	0.013	2.335	0.117
Explained	0.078	3	0.026	4.669	0.010
Residual	0.144	26	0.006		
Total	0.222	29	0.008		

MALE RAT

COVARIANCE ANALYSIS
PER SERIES
VERSUS BODY WEIGHT ON D 30

COMPARISON OF THE TWO SERIES : Controls
Pao V 56.5 mg.kg P.O.

SOURCE OF VARIATION	SUM OF SQUARES	DDL	ESTIMATED VARIANCE	F	SIGNIF. OF F
Covariate : weight, D 30	11.228	1	11.228	24.551	0.000
Series	2.460	1	2.460	5.380	0.033
Explained	15.157	2	7.578	16.570	0.000
Residual	7.775	17	0.457		
Total	22.932	19	1.207		

COMPARISON OF THE TWO SERIES : Controls
Pao V 226 mg.kg P.O.

SOURCE OF VARIATION	SUM OF SQUARES	DDL	ESTIMATED VARIANCE	F	SIGNIF. OF F
Covariate : weight, D 30	14.387	1	14.387	16.173	0.001
Series	1.927	1	1.927	2.166	0.159
Explained	14.906	2	7.453	8.378	0.003
Residual	15.123	17	.0890		
Total	30.029	19	1.580		

FEMALE RATS

TABLES 34 to 65

Pao V. TOXICOLOGIC ORIENTATION ASSAY
FEMALE RAT : WEIGHT EVOLUTION

RECAPITULATION : MEAN, ERROR AND STANDARD DEVIATION, VARIANCE

D 1					
SERIES	N	MEAN	STANDARD ERROR	STANDARD DEVIATION	VARIANCE
CONTROLS:	10	128.4	1.82	5.76	33.1556
Pao V: 73.2	10	129.2	1.81	5.73	32.8444
Pao V: 293	10	128.3	1.66	5.25	27.5667

D 4					
SERIES	N	MEAN	STANDARD ERROR	STANDARD DEVIATION	VARIANCE
CONTROLS:	10	144.5	2.33	7.37	54.2778
Pao V: 73.2	10	142.0	2.07	6.53	42.6667
Pao V: 293	10	140.6	2.19	6.93	48.0444

D 8					
SERIES	N	MEAN	STANDARD ERROR	STANDARD DEVIATION	VARIANCE
CONTROLS:	10	160.6	4.11	12.99	168.7111
Pao V: 73.2	10	173.2	3.53	11.16	124.5000
Pao V: 293	10	173.2	2.54	8.04	64.7111

D 11					
SERIES	N	MEAN	STANDARD ERROR	STANDARD DEVIATION	VARIANCE
CONTROLS:	10	171.1	4.81	15.21	231.4333
Pao V: 73.2	10	165.4	3.96	12.53	156.9333
Pao V: 293	10	166.3	3.87	12.24	149.7889

D 15					
SERIES	N	MEAN	STANDARD ERROR	STANDARD DEVIATION	VARIANCE
CONTROLS:	10	188.5	7.00	22.13	489.6111
Pao V: 73.2	10	179.2	4.60	14.54	211.5111
Pao V: 293	10	180.9	4.19	13.24	175.2111

D 18					
SERIES	N	MEAN	STANDARD ERROR	STANDARD DEVIATION	VARIANCE
CONTROLS:	10	204.1	8.36	26.43	698.3222
Pao V: 73.2	10	188.7	5.06	15.99	255.5667
Pao V: 293	10	192.0	3.23	10.21	104.2222

Pao V. TOXICOLOGIC ORIENTATION ASSAY
FEMALE RAT : WEIGHT EVOLUTION

RECAPITULATION : MEAN, ERROR AND STANDARD DEVIATION, VARIANCE

D 22					
SERIES	N	MEAN	STANDARD ERROR	STANDARD DEVIATION	VARIANCE
CONTROLS:	10	215.6	9.31	29.44	866.7111
Pao V 73.2	10	197.9	5.95	18.83	354.5444
Pao V 293	10	204.1	4.36	13.80	190.3222

D 25					
SERIES	N	MEAN	STANDARD ERROR	STANDARD DEVIATION	VARIANCE
CONTROLS:	10	222.8	8.76	27.71	767.7333
Pao V 73.2	10	211.7	6.90	21.83	476.6778
Pao V 293	10	216.9	5.18	16.39	268.7667

D 29					
SERIES	N	MEAN	STANDARD ERROR	STANDARD DEVIATION	VARIANCE
CONTROLS:	10	231.9	9.61	30.40	924.3222
Pao V 73.2	10	221.9	7.42	23.48	551.2111
Pao V 293	10	227.1	6.12	19.34	374.1000

D 30					
SERIES	N	MEAN	STANDARD ERROR	STANDARD DEVIATION	VARIANCE
CONTROLS:	10	209.9	8.83	27.92	779.4333
Pao V 73.2	10	199.1	6.75	21.34	455.2111
Pao V 293	10	201.0	5.25	16.59	275.1111

D 29 - D 1					
SERIES	N	MEAN	STANDARD ERROR	STANDARD DEVIATION	VARIANCE
CONTROLS:	10	103.5	8.67	27.40	750.9444
Pao V 73.2	10	92.7	5.93	18.76	351.7889
Pao V 293	10	98.8	5.08	16.05	257.7333

Pao V. TOXICOLOGIC ORIENTATION ASSAY
FEMALE RAT : WEIGHT EVOLUTION

RECAPITULATION : MEAN, ERROR AND STANDARD DEVIATION, VARIANCE

D 22 to D 25					
SERIES	N	MEAN	STANDARD ERROR	STANDARD DEVIATION	VARIANCE
CONTROLS:	10	7.2	2.38	7.54	56.8444
Pao V 73.2	10	13.8	1.78	5.63	31.7333
Pao V 293	10	12.8	1.19	3.77	14.1778

D 25 to D 29					
SERIES	N	MEAN	STANDARD ERROR	STANDARD DEVIATION	VARIANCE
CONTROLS:	10	9.1	1.03	3.25	10.5444
Pao V 73.2	10	10.2	1.50	4.73	22.4000
Pao V 293	10	10.2	1.43	4.52	20.4000

*Pao V. TOXICOLOGIC ORIENTATION ASSAY**FEMALE RAT : WEIGHT EVOLUTION*

COMPARED SERIES

SERIES 1 : Controls

SERIES 2 : Pao V : 73.2

SERIES 3 : Pao V : 293

VARIABLE	COMPARED VARIANCES (BARTLETT'S TEST)				COMPARED MEANS				
	ddl	Chi2	P	Sig	Test	ddl		P	Sig
D 1	2	0.091	0.9556	NS	AOV	2. 27	F= 0.078	.9251	NS
D 4	2	0.124	0.9398	NS	AOV	2. 27	F= 0.808	.4563	NS
D 8	2	1.910	0.3848	NS	AOV	2. 27	F= 0.458	.6371	NS
D 11	2	0.508	0.7756	NS	AOV	2. 27	F= 0.523	.5984	NS
D 15	2	2.723	0.2562	NS	AOV	2. 27	F= 0.840	.4429	NS
D 18	2	7.360	0.0252	S	K-W	2	X2= 2.48	.2894	NS
D 22	2	4.951	0.0841	NS	AOV	2. 27	F= 1.714	.1991	NS
D 25	2	2.281	0.3197	NS	AOV	2. 27	F= 0.611	.5499	NS
D 29	2	1.773	0.4122	NS	AOV	2. 27	F= 0.406	.6705	NS
D 30	2	2.288	0.3186	NS	AOV	2. 27	F= 0.661	.5247	NS
D 29 - D 1	2	2.698	0.2595	NS	AOV	2. 27	F= 0.647	.5317	NS

Pao V. TOXICOLOGIC ORIENTATION ASSAY
FEMALE RAT : WEIGHT EVOLUTION

RECAPITULATION : MEAN, ERROR AND STANDARD DEVIATION, VARIANCE

D 1 to D 4					
SERIES	N	MEAN	STANDARD ERROR	STANDARD DEVIATION	VARIANCE
CONTROLS:	10	16.1	0.95	3.00	8.9889
Pao V : 73.2	10	12.8	0.53	1.69	2.8444
Pao V : 293	10	12.3	1.38	4.37	19.1222

D 4 to D 8					
SERIES	N	MEAN	STANDARD ERROR	STANDARD DEVIATION	VARIANCE
CONTROLS:	10	16.1	2.42	7.65	58.5444
Pao V : 73.2	10	14.5	1.71	5.42	29.3889
Pao V : 293	10	16.0	1.51	4.78	22.8889

D 8 to D 11					
SERIES	N	MEAN	STANDARD ERROR	STANDARD DEVIATION	VARIANCE
CONTROLS:	10	10.5	1.39	4.40	19.3889
Pao V : 73.2	10	8.9	1.30	4.12	16.9889
Pao V : 293	10	9.7	1.47	4.64	21.5667

D 11 to D 15					
SERIES	N	MEAN	STANDARD ERROR	STANDARD DEVIATION	VARIANCE
CONTROLS:	10	17.4	2.53	7.99	63.8222
Pao V : 73.2	10	13.8	1.01	3.19	10.1778
Pao V : 293	10	14.6	1.31	4.14	17.5556

D 15 to D 18					
SERIES	N	MEAN	STANDARD ERROR	STANDARD DEVIATION	VARIANCE
CONTROLS:	10	15.6	2.00	6.33	40.0444
Pao V : 73.2	10	9.5	0.78	2.46	6.0556
Pao V : 293	10	11.1	1.30	4.12	16.9889

D 18 to D 22					
SERIES	N	MEAN	STANDARD ERROR	STANDARD DEVIATION	VARIANCE
CONTROLS:	10	11.5	2.01	6.36	40.5000
Pao V : 73.2	10	9.2	1.46	4.61	21.2889
Pao V : 293	10	12.1	1.62	5.11	26.1000

Pao V. TOXICOLOGIC ORIENTATION ASSAY
FEMALE RAT : FOOD INTAKE (g/d/rat)

RECAPITULATION : MEAN, ERROR AND STANDARD DEVIATION, VARIANCE

D 1 to D 4					
SERIES	N	MEAN	STANDARD ERROR	STANDARD DEVIATION	VARIANCE
CONTROLS:	10	19.08	0.924	2.067	4.2720
Pao V: 73.2	10	18.16	0.690	1.542	2.3780
Pao V: 293	10	17.72	0.755	1.687	2.8470

D 4 to D 8					
SERIES	N	MEAN	STANDARD ERROR	STANDARD DEVIATION	VARIANCE
CONTROLS:	10	18.64	0.764	1.708	2.9180
Pao V: 73.2	10	18.88	0.618	1.381	1.9070
Pao V: 293	10	15.78	2.727	6.097	37.1720

D 8 to D 11					
SERIES	N	MEAN	STANDARD ERROR	STANDARD DEVIATION	VARIANCE
CONTROLS:	10	18.48	0.803	1.796	3.2270
Pao V: 73.2	10	17.84	0.695	1.555	2.4180
Pao V: 293	10	17.72	0.599	1.339	1.7920

D 11 to D 15					
SERIES	N	MEAN	STANDARD ERROR	STANDARD DEVIATION	VARIANCE
CONTROLS:	10	20.18	0.972	2.174	4.7270
Pao V: 73.2	10	18.10	0.849	1.899	3.6050
Pao V: 293	10	18.30	0.812	1.815	3.2950

D 15 to D 18					
SERIES	N	MEAN	STANDARD ERROR	STANDARD DEVIATION	VARIANCE
CONTROLS:	10	21.80	1.463	3.271	10.7000
Pao V: 73.2	10	20.22	0.997	2.229	4.9670
Pao V: 293	10	20.82	0.833	1.862	3.4670

D 18 to D 22					
SERIES	N	MEAN	STANDARD ERROR	STANDARD DEVIATION	VARIANCE
CONTROLS:	10	21.54	1.268	2.836	8.0430
Pao V: 73.2	10	19.54	0.898	2.008	4.0330
Pao V: 293	10	20.34	0.604	1.350	1.8230

Pao V. TOXICOLOGIC ORIENTATION ASSAY
FEMALE RAT : FOOD INTAKE (g/d/rat)

RECAPITULATION : MEAN, ERROR AND STANDARD DEVIATION, VARIANCE

D 22 to D 25					
SERIES	N	MEAN	STANDARD ERROR	STANDARD DEVIATION	VARIANCE
CONTROLS:	10	19.98	0.781	1.747	3.0520
Pao V : 73.2	10	19.50	0.969	2.166	4.6900
Pao V : 293	10	19.72	0.694	1.551	2.4070

D 25 to D 29					
SERIES	N	MEAN	STANDARD ERROR	STANDARD DEVIATION	VARIANCE
CONTROLS:	10	20.44	0.757	1.692	2.8630
Pao V : 73.2	10	20.32	0.941	2.104	4.4270
Pao V : 293	10	20.48	0.775	1.733	3.0020

*Pao V. TOXICOLOGIC ORIENTATION ASSAY**FEMALE RAT : FOOD INTAKE (g/d/rat)*

COMPARED SERIES

SERIES 1 : Controls

SERIES 2 : Pao V. : 73.2

SERIES 3 : Pao V. : 293

VARIABLE	COMPARED VARIANCES (BARTLETT'S TEST)				COMPARED MEANS				
	ddl	Chi2	P	Sig	Test	ddl		P	Sig
D 1 to D 4	2	0.333	0.8466	NS	AOV	2. 12	F= 0.761	.4886	NS
D 4 to D 8	2	9.306	0.0095	NS	AOV	2	X2= 0.86	.6505	NS
D 8 to D 11	2	0.309	0.8570	NS	AOV	2. 12	F= 0.337	.7207	NS
D 11 to D 15	2	0.130	0.9370	NS	AOV	2. 12	F= 1.699	.2241	NS
D 15 to D 18	2	1.232	0.5401	NS	AOV	2. 12	F= 0.499	.6194	NS
D 18 to D 22	2	1.871	0.3923	NS	AOV	2. 12	F= 1.094	.3662	NS
D 22 to D 25	2	0.420	0.8106	NS	AOV	2. 12	F= 0.085	.9188	NS
D 25 to D 29	2	0.214	0.8986	NS	AOV	2. 12	F= 0.010	.9900	NS

*Pao V. TOXICOLOGIC ORIENTATION ASSAY**FEMALE RAT : WATER INTAKE (ml/d/rat)*

RECAPITULATION : MEAN, ERROR AND STANDARD DEVIATION, VARIANCE

D 1 to D 4					
SERIES	N	MEAN	STANDARD ERROR	STANDARD DEVIATION	VARIANCE
CONTROLS:	5	22.28	1.566	3.501	12.2570
Pao V: 73.2	5	21.72	0.441	0.986	0.9720
Pao V: 293	5	20.64	0.785	1.754	3.0780

D 4 to D 8					
SERIES	N	MEAN	STANDARD ERROR	STANDARD DEVIATION	VARIANCE
CONTROLS:	5	24.22	1.762	3.940	15.5270
Pao V: 73.2	5	22.00	0.685	1.531	2.3450
Pao V: 293	5	21.12	2.541	5.682	32.2870

D 8 to D 11					
SERIES	N	MEAN	STANDARD ERROR	STANDARD DEVIATION	VARIANCE
CONTROLS:	5	23.12	1.312	2.934	8.6070
Pao V: 73.2	5	24.08	0.030	4.539	20.6070
Pao V: 293	5	22.24	1.279	2.861	8.1830

D 11 to D 15					
SERIES	N	MEAN	STANDARD ERROR	STANDARD DEVIATION	VARIANCE
CONTROLS:	5	24.40	1.811	4.050	16.4050
Pao V: 73.2	5	19.92	0.813	1.819	3.3070
Pao V: 293	5	22.64	1.495	3.342	11.1680

D 15 to D 18					
SERIES	N	MEAN	STANDARD ERROR	STANDARD DEVIATION	VARIANCE
CONTROLS:	5	26.76	1.558	3.483	12.1330
Pao V: 73.2	5	24.72	0.551	1.232	1.5170
Pao V: 293	5	27.34	1.578	3.527	12.4430

D 18 to D 22					
SERIES	N	MEAN	STANDARD ERROR	STANDARD DEVIATION	VARIANCE
CONTROLS:	5	26.74	1.716	3.838	14.7280
Pao V: 73.2	5	23.64	0.993	2.220	4.9280
Pao V: 293	5	27.00	1.968	4.401	19.3650

Pao V. TOXICOLOGIC ORIENTATION ASSAY
FEMALE RAT : WATER INTAKE (ml/d/rat)

RECAPITULATION : MEAN, ERROR AND STANDARD DEVIATION, VARIANCE

D 22 to D 25					
SERIES	N	MEAN	STANDARD ERROR	STANDARD DEVIATION	VARIANCE
CONTROLS:	5	25.46	1.355		
Pao V: 73.2	5	23.42	0.618	3.030	9.1830
Pao V: 293	5	24.60	1.109	1.381	1.9070
				2.479	6.1450

D 25 to D 29					
SERIES	N	MEAN	STANDARD ERROR	STANDARD DEVIATION	VARIANCE
CONTROLS:	5	26.50	2.827		
Pao V: 73.2	5	25.78	2.383	6.322	39.9700
Pao V: 293	5	26.68	2.435	5.327	28.3820
				5.445	29.6520

Pao V. TOXICOLOGIC ORIENTATION ASSAY
FEMALE RAT : WATER INTAKE (ml/d/rat)
 COMPARED SERIES

SERIES 1 : Controls

SERIES 2 : Pao. V. : 73.2

SERIES 3 : Pao V. : 293

VARIABLE	COMPARED VARIANCES (BARTLETT'S TEST)				COMPARED MEANS				
	ddl	Chi2	P	Sig	Test	ddl		P	Sig
D 1 to D 4	2	5.317	0.0700	NS	AOV	2. 12	F= 0.639	.5447	NS
D 4 to D 8	2	4.969	0.0834	NS	AOV	2. 12	F= 0.763	.4875	NS
D 8 to D 11	2	1.039	0.5948	NS	AOV	2. 12	F= 0.340	.7186	NS
D 11 to D 15	2	2.116	0.3471	NS	AOV	2. 12	F= 2.475	.1259	NS
D 15 to D 18	2	3.800	0.1496	NS	AOV	2. 12	F= 1.089	.3678	NS
D 18 to D 22	2	1.614	0.4462	NS	AOV	2. 12	F= 1.343	.2975	NS
D 22 to D 25	2	2.039	0.3607	NS	AOV	2. 12	F= 0.913	.4275	NS
D 25 to D 29	2	0.129	0.9376	NS	AOV	2. 12	F= 0.035	.9660	NS

Pao V. TOXICOLOGIC ORIENTATION ASSAY
FEMALE RAT : WATER / FOOD RATIO
 COMPARED SERIES

SERIES 1 : Controls

SERIES 2 : Pao V. : 73.2

SERIES 3 : Pao V. : 293

VARIABLE	COMPARED VARIANCES (BARTLETT'S TEST)				COMPARED MEANS				
	ddl	Chi2	P	Sig	Test	ddl		P	Sig
D 1 to D 4	2	4.475	0.1067	NS	AOV	2. 12	F= 0.112	.8951	NS
D 4 to D 8	2	5.715	0.0574	NS	AOV	2. 12	F= 1.338	.2987	NS
D 8 to D 11	2	2.171	0.3378	NS	AOV	2. 12	F= 0.402	.6775	NS
D 11 to D 15	2	3.452	0.1780	NS	AOV	2. 12	F= 1.126	.3563	NS
D 15 to D 18	2	2.803	0.2462	NS	AOV	2. 12	F= 0.327	.7271	NS
D 18 to D 22	2	1.331	0.5139	NS	AOV	2. 12	F= 0.940	.4177	NS
D 22 to D 25	2	2.070	0.3553	NS	AOV	2. 12	F= 0.268	.7694	NS
D 25 to D 29	2	1.361	0.5064	NS	AOV	2. 12	F= 0.008	.9918	NS

Table 47

Pao V. TOXICOLOGIC ORIENTATION ASSAY

FEMALE RAT : HEMATOLOGY

RECAPITULATION : MEAN, ERROR AND STANDARD DEVIATION, VARIANCE

ERYTHROCYTES					
SERIES	N	MEAN	STANDARD ERROR	STANDARD DEVIATION	VARIANCE
CONTROLS:	10	7.07	0.120	0.379	0.1438
Pao V: 73.2	10	7.05	0.167	0.529	0.2804
Pao V: 293	10	6.88	0.158	0.499	0.2493

HEMOGLOBIN					
SERIES	N	MEAN	STANDARD ERROR	STANDARD DEVIATION	VARIANCE
CONTROLS:	10	10.0	0.14	0.43	0.1854
Pao V: 73.2	10	9.9	0.26	0.81	0.6560
Pao V: 293	10	9.9	0.20	0.62	0.3899

HEMATOCRIT					
SERIES	N	MEAN	STANDARD ERROR	STANDARD DEVIATION	VARIANCE
CONTROLS:	10	0.46	0.005	0.016	0.0002
Pao V: 73.2	10	0.45	0.006	0.019	0.0004
Pao V: 293	10	0.45	0.009	0.028	0.0008

M C V					
SERIES	N	MEAN	STANDARD ERROR	STANDARD DEVIATION	VARIANCE
CONTROLS:	10	64.65	1.036	3.275	10.7231
Pao V: 73.2	10	64.13	0.994	3.145	9.8929
Pao V: 293	10	65.35	1.125	3.556	12.6475

M C C					
SERIES	N	MEAN	STANDARD ERROR	STANDARD DEVIATION	VARIANCE
CONTROLS:	10	21.96	0.234	0.741	0.5494
Pao V: 73.2	10	22.03	0.422	1.333	1.7775
Pao V: 293	10	22.03	0.149	0.472	0.2224

LEUCOCYTES					
SERIES	N	MEAN	STANDARD ERROR	STANDARD DEVIATION	VARIANCE
CONTROLS:	10	7.279	0.5394	1.7058	2.9099
Pao V: 73.2	10	7.845	0.5216	1.6493	2.7201
Pao V: 293	10	9.126	0.6420	2.0303	4.1221

Pao V. TOXICOLOGIC ORIENTATION ASSAY
FEMALE RAT : HEMATOLOGY

RECAPITULATION : MEAN, ERROR AND STANDARD DEVIATION, VARIANCE

THROMBOCYTES					
SERIES	N	MEAN	STANDARD ERROR	STANDARD DEVIATION	VARIANCE
CONTROLS:	10	454	48.6	153.6	23605.8222
<i>Pao V</i> : 73.2	10	596	72.7	229.8	52805.5111
<i>Pao V</i> : 293	10	584	100.0	316.2	99998.1000

Table 49

Pao V. TOXICOLOGIC ORIENTATION ASSAY
FEMALE RAT : HEMATOLOGY

COMPARED SERIES

SERIES 1 : Controls

SERIES 2 : Pao V. : 73.2

SERIES 3 : Pao V. : 293

VARIABLE	COMPARED VARIANCES (BARTLETT'S TEST)				COMPARED MEANS				
	ddl	Chi2	P	Sig	Test	ddl		P	Sig
Erythrocytes	2	1.015	0.6019	NS	AOV	2. 27	F= 0.460	.6362	NS
Hemoglobin	2	3.233	0.1986	NS	AOV	2. 27	F= 0.089	.9155	NS
Hematocrit	2	2.870	0.2381	NS	AOV	2. 27	F= 0.284	.7551	NS
MCV	2	0.136	0.9343	NS	AOV	2. 27	F= 0.340	.7148	NS
MCC	2	8.907	0.0116	S	K-W	2	X2= 0.43	.8080	NS
Leucocytes	2	0.441	0.8020	NS	AOV	2. 27	F= 2.754	.0816	NS
Thrombocytes	2	4.197	0.1227	NS	AOV	2. 27	F= 1.060	.3605	NS

Table 50

Pao V. TOXICOLOGIC ORIENTATION ASSAY
FEMALE RAT : BIOCHEMICAL DATA

RECAPITULATION : MEAN, ERROR AND STANDARD DEVIATION, VARIANCE

CHOLESTER					
SERIES	N	MEAN	STANDARD ERROR	STANDARD DEVIATION	VARIANCE
CONTROLS:	10	3.62	0.245	0.776	0.6025
<i>Pao V: 73.2</i>	10	3.42	0.165	0.523	0.2734
<i>Pao V: 293</i>	10	3.83	0.154	0.486	0.2367

PROTEINS					
SERIES	N	MEAN	STANDARD ERROR	STANDARD DEVIATION	VARIANCE
CONTROLS:	10	67.6	0.19	3.75	14.0840
<i>Pao V: 73.2</i>	10	67.2	0.51	1.61	0.6000
<i>Pao V: 293</i>	10	67.1	0.78	2.48	6.1490

CALCIUM					
SERIES	N	MEAN	STANDARD ERROR	STANDARD DEVIATION	VARIANCE
CONTROLS:	10	2.78	0.046	0.146	0.0212
<i>Pao V: 73.2</i>	10	2.83	0.039	0.123	0.0150
<i>Pao V: 293</i>	10	2.82	0.039	0.124	0.0155

OSMOLARITY					
SERIES	N	MEAN	STANDARD ERROR	STANDARD DEVIATION	VARIANCE
CONTROLS:	10	1643	111.8	353.5	124929.1667
<i>Pao V: 73.2</i>	10	1670	91.7	2859	84052.5000
<i>Pao V: 293</i>	10	1247	76.9	243.1	59084.4444

URIN CREAT.					
SERIES	N	MEAN	STANDARD ERROR	STANDARD DEVIATION	VARIANCE
CONTROLS:	10	12.6	0.95	3.01	9.0450
<i>Pao V: 73.2</i>	10	12.6	0.79	2.48	6.1694
<i>Pao V: 293</i>	10	9.8	0.82	2.59	6.6966

SERUM CREAT.					
SERIES	N	MEAN	STANDARD ERROR	STANDARD DEVIATION	VARIANCE
CONTROLS:	10	70.8	4.16	13.15	172.9965
<i>Pao V: 73.2</i>	10	76.5	1.23	3.89	15.1427
<i>Pao V: 293</i>	10	74.0	1.59	5.03	25.2832

*Pao V. TOXICOLOGIC ORIENTATION ASSAY**FEMALE RAT : BIOCHEMICAL DATA*

RECAPITULATION : MEAN, ERROR AND STANDARD DEVIATION, VARIANCE

CREAT. CLEAR					
SERIES	N	MEAN	STANDARD ERROR	STANDARD DEVIATION	VARIANCE
CONTROLS:	10	0.847	0.0597	0.1887	0.0356
<i>Pao V</i> : 73.2	10	0.735	0.0754	0.2384	0.0568
<i>Pao V</i> : 293	10	0.835	0.0944	0.2985	0.0891

UREA					
SERIES	N	MEAN	STANDARD ERROR	STANDARD DEVIATION	VARIANCE
CONTROLS:	10	6.75	0.128	0.406	0.1644
<i>Pao V</i> : 73.2	10	7.05	0.228	0.720	0.5178
<i>Pao V</i> : 293	10	6.90	0.216	0.682	0.4654

BILIRUBIN					
SERIES	N	MEAN	STANDARD ERROR	STANDARD DEVIATION	VARIANCE
CONTROLS:	10	6.16	0.191	0.604	0.3649
<i>Pao V</i> : 73.2	10	5.22	0.546	1.726	2.9796
<i>Pao V</i> : 293	10	6.27	0.398	1.259	1.5846

ALAT					
SERIES	N	MEAN	STANDARD ERROR	STANDARD DEVIATION	VARIANCE
CONTROLS:	10	90.1	9.46	29.92	894.9889
<i>Pao V</i> : 73.2	10	101.3	2.88	9.09	82.6778
<i>Pao V</i> : 293	10	131.0	15.7	49.63	2463.5556

ASAT					
SERIES	N	MEAN	STANDARD ERROR	STANDARD DEVIATION	VARIANCE
CONTROLS:	10	21.4	0.98	3.10	9.6000
<i>Pao V</i> : 73.2	10	21.4	0.72	2.27	5.1556
<i>Pao V</i> : 293	10	25.6	1.93	6.10	37.1556

AL. PHOSPH.					
SERIES	N	MEAN	STANDARD ERROR	STANDARD DEVIATION	VARIANCE
CONTROLS:	10	116	15.9	50.3	2528.4444
<i>Pao V</i> : 73.2	10	131	10.6	33.5	1123.6111
<i>Pao V</i> : 293	10	127	8.8	27.9	775.7889

Pao V. TOXICOLOGIC ORIENTATION ASSAY

FEMALE RAT : BIOCHEMICAL DATA

COMPARED SERIES

SERIES 1 : Controls

SERIES 2 : Pao V. : 73.2

SERIES 3 : Pao V. : 293

VARIABLE	COMPARED VARIANCES (BARTLETT'S TEST)				COMPARED MEANS				
	ddl	Chi2	P	Sig	Test	ddl		P	Sig
Cholester	2	2.305	0.3159	NS	AOV	2. 27	F= 1.107	.3452	NS
Proteins	2	5.764	0.0560	NS	AOV	2. 27	F= 0.092	.9122	NS
Calcium	2	0.320	0.8521	NS	AOV	2. 27	F= 0.369	.6947	NS
Osmolarity	2	1.198	0.5493	NS	AOV	2. 27	F= 6.261	.0058	S
Urin creat.	2	0.358	0.8362	NS	AOV	2. 27	F= 3.556	.0426	S
Scrum creat.	2	14.520	0.0007	S	K-W	2	X2= 2.11	.3485	NS
Creat. clear	2	1.770	0.4127	NS	AOV	2. 27	F= 0.618	.5463	NS
Urea	2	2.963	0.2273	NS	AOV	2. 27	F= 0.596	.5581	NS
Bilirubin	2	8.110	0.0173	S	K-W	2	X2= 7.81	.0202	S
ALAT	2	18.129	0.0001	S	K-W	2	X2= 12.68	.0018	S
ASAT	2	8.884	0.0118	S	K-W	2	X2= 4.36	.1130	NS
Al Phosph.	2	3.239	0.1980	NS	AOV	2. 27	F= 0.393	.6787	NS

Table 53

----- STUDENT - NEWMAN - KEULS -----

OSMOLARITY VARIABLE PER SERIES VARIABLE

Classification test : Student - Newman - Keuls with significance level .050

Difference between two means is significant if

$$\text{MEAN (J) - MEAN (I)} \geq 211.3710 * \text{RANGE} * \text{SQRT (1/N (I) + 1/N (J))}$$

with the following range value :

Step	2	3
RANGE	2.90	3.50

* indicates significant differences

	C	
	o	P
	P	n B
	B	t :
	:	r 7
	2	ô 3
	9	l .
	3	e 2
MEAN		SERIES
1247.0000		Pao V 293 *
1642.5000		Controls
1669.5000		Pao V 73.2 *

Subset 1	
Group	Pao V 293
mean	1247.0000

Subset 2		
Group	Controls	Pao V 73.2
mean	1642.5000	1669.5000

FEMALE RAT

----- STUDENT - NEWMAN - KEULS -----

URINE CREATININ VARIABLE PER SERIES VARIABLE

Classification test : Student - Newman - Keuls with significance level .050

Difference between two means is significant if

$$\text{MEAN (J)} - \text{MEAN (I)} \geq 1.9110 * \text{RANGE} * \text{SQRT (1/N (I) + 1/N (J))}$$

with the following range value :

Steep	2	3
RANGE	2.90	3.50

- *Les groupes...*

Subset 1			
Group	Pao V 293	Pao V 73.2	Controls
mean	9.8100	12.5500	12.6500

*Pao V. TOXICOLOGIC ORIENTATION ASSAY**FEMALE RAT : BIOCHEMICAL DATA*

COMPARISON OF TWO INDEPENDENT SERIES : MANN-WHITNEY U TEST

Variable	controls		Pao V. : 73.2		U	Z	Prob 2b S to P \leq .050
	N	MEDIAN	N	MEDIAN			
Bilirubin	10	6.10000	10	5.20000	16	2.6050	0.0092 S
Alat	10	95.50000	10	101.50000	43	-0.5285	0.5971 NS

Variable	controls		Pao V. 293		U	Z	Prob 2b S to P \leq .050
	N	MEDIAN	N	MEDIAN			
Bilirubin	10	6.10000	10	5.7500	46	0.3020	0.7626 NS
Alat	10	95.50000	10	135.5000	10	-3.0577	0.0022 S

*Pao V. TOXICOLOGIC ORIENTATION ASSAY**FEMALE RAT : URINE EXCRETION*

RECAPITULATION : MEAN, ERROR AND STANDARD DEVIATION, VARIANCE

EXC. VOL. 7 H					
SERIES	N	MEAN	STANDARD ERROR	STANDARD DEVIATION	VARIANCE
CONTROLS:	10	7.6	0.51	1.63	2.6489
Pao V: 73.2	10	6.8	0.49	1.56	2.4356
Pao V: 293	10	7.5	0.45	1.44	2.0668

% EXC. 7 H					
SERIES	N	MEAN	STANDARD ERROR	STANDARD DEVIATION	VARIANCE
CONTROLS:	10	112.94	7.216	22.819	520.6960
Pao V: 73.2	10	92.60	11.764	37.202	1384.0200
Pao V: 293	10	109.37	5.664	17.912	320.8445

VOL 7 - 24 H					
SERIES	N	MEAN	STANDARD ERROR	STANDARD DEVIATION	VARIANCE
CONTROLS:	10	5.0	0.50	1.57	2.4573
Pao V: 73.2	10	4.6	0.37	1.18	1.3818
Pao V: 293	10	6.5	0.45	1.41	2.0004

EXC. VOL. 24 H					
SERIES	N	MEAN	STANDARD ERROR	STANDARD DEVIATION	VARIANCE
CONTROLS:	10	12.8	0.92	2.92	8.5551
Pao V: 73.2	10	11.4	0.64	2.02	4.0840
Pao V: 293	10	13.9	0.58	1.84	3.3734

pH					
SERIES	N	MEAN	STANDARD ERROR	STANDARD DEVIATION	VARIANCE
CONTROLS:	10	6.10	0.125	0.394	0.1556
Pao V: 73.2	10	5.95	0.090	0.284	0.0806
Pao V: 293	10	6.10	0.145	0.459	0.2111

*Pao V. TOXICOLOGIC ORIENTATION ASSAY**FEMALE RAT : URINE EXCRETION*

COMPARED SERIES

SERIES 1 : Controls

SERIES 2 : Pao V : 73.2

SERIES 3 : Pao V : 293

VARIABLE	COMPARED VARIANCES (BARTLETT'S TEST)				COMPARED MEANS				
	ddl	Chi2	P	Sig	Test	ddl		P	Sig
Exc. Vol 7 h	2	0.135	0.9349	NS	AOV	2.27	F= 1.089	.3508	NS
% exc. 7 h	2	4.876	0.0873	NS	AOV	2.27	F= 1.590	.2224	NS
vol. 7-24 h	2	0.706	0.7026	NS	AOV	2.27	F= 5.039	.0138	S
Exc. vol. 24 h	2	2.185	0.3354	NS	AOV	2.27	F= 3.055	.0636	NS
pH	2	1.930	0.3810	NS	AOV	2.27	F= 0.503	.6103	NS

FEMALE RAT

-----STUDENT - NEWMAN - KEULS -----

URINARY VOLUME FROM 7 H TO 24 H VARIABLE PER SERIES VARIABLE

Classification test : Student - Newman - Keuls with significance level .050

Difference between two means is significant if

$$\text{MEAN (J) - MEAN (I)} \geq .9865 * \text{RANGE} * \text{SQRT (1/N (I) + 1/N (J))}$$

with the following range value :

Steep	2	3
RANGE	2.90	3.50

* indicates significant differences

	MEAN	SERIES
	4.5800	Pao V 73.2
	4.9800	Controls
	6.4600	Pao V 293 **
Subst 1		
Group	Pao V: 73.2	Controls
mean	4.5800	4.9800
Subst 2		
Group	Pao V 293	
mean	6.46000	

QUALITATIVE URINE ANALYSIS (REAGENT STRIPS)

FEMALE RAT

	PROTEINS	GLUCOSE	KETONE COMPOUNDS	SANG BLOOD	HEMOGLOBIN
CONTROLS					
1 S 1053	-	-	-	-	-
2 S 1076	-	-	-	-	-
3 S 1065	0.3	-	+	-	-
4 S 1069	-	-	-	-	-
5 S 1062	-	-	-	-	-
6 S 1075	0.3	-	+	-	-
7 S 1058	-	-	+	-	10
8 S 1074	-	-	+	-	-
9 S 1045	-	-	-	-	-
10 S 1054	-	-	+	-	-
Pao V. 73.2 mg.kg ⁻¹					
1 S 1046	-	-	-	-	-
2 S 1047	0.3	-	+	-	-
3 S 1055	-	-	+	-	-
4 S 1073	0.3	-	+	-	-
5 S 1056	-	-	-	-	-
6 S 1064	-	-	-	-	10
7 S 1060	-	-	-	-	-
8 S 1068	-	-	+	5-10	-
9 S 1048	-	-	-	-	-
10 S 1072	-	-	+	-	-
Pao V. 293 mg.kg ⁻¹					
1 S 1052	-	-	-	-	-
2 S 1057	-	-	-	-	-
3 S 1050	-	-	+	-	-
4 S 1071	-	-	+	-	-
5 S 1059	-	-	+	-	-
6 S 1067	-	-	-	-	-
7 S 1061	-	-	+	-	-
8 S 1063	-	-	-	-	-
9 S 1051	-	-	-	-	-
10 S 1066	-	-	-	-	-