



**Trial Report
n° 1/2006**

**lactium™ bio-activity
in Crispies before and
after baking**

KAMPPFFMEYER Food Innovation

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Date 03/01/2006

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TRIALS AIM :

To validate the influence of process on lactium™ bio-activity

- after crispies extrusion process (crispies)
- and on crispies after baking (baked crispies)

NB : The both crispies have been supplied by Kampffmeyer.



1- MATERIEL & METHODS

Conditioned Defensive Burying method

The Relaxing effect of crispies and baked crispies containing lactium™ was tested on Conditioned Defensive Burying method.

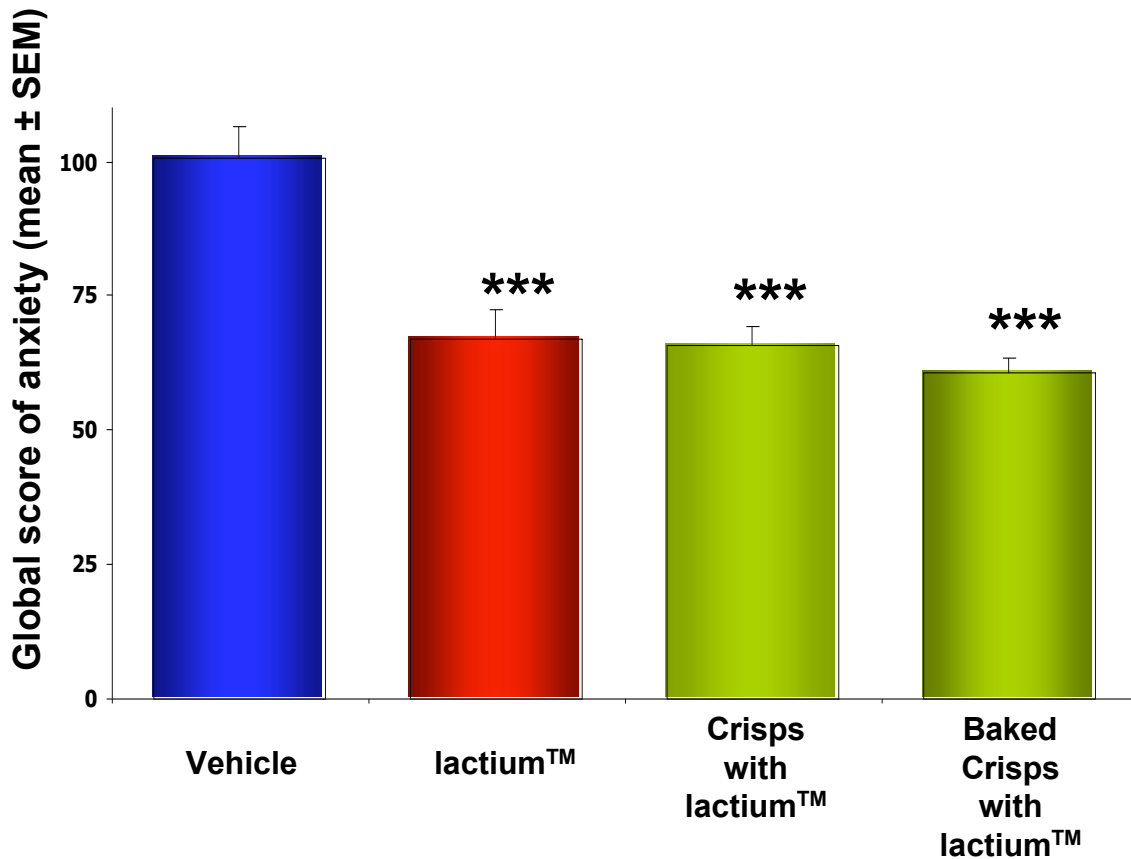
Crispies have been orally administered to the male Wistar rat :

- Acclimatization of the rats during a period of 7 days
- 4 groups of 12 rats:
 - vehicle,
 - lactium™ (reference),
 - crispies (extrusion)
 - baked crispies
- Crispies were stored at 4°C
- Crispies were administered at 1.2 and 1.92g/kg of body weight for crispies and baked crispies respectively so as the rats ingested 15mg of lactium™/kg of body weight which corresponds to the active dose in rats
- Oral administration was made 1 hour before the test
- After shock administration (stressing event), the behavior of the rats were recorded during 5 minutes
- Global anxiety score = Sum of the rankings for three parameters:
 - duration of probe-burying;
 - number of head stretching towards the probe
 - percentage of approaches towards the probe followed by retreats



2- RESULTS

Products	Vehicle (n = 12)	lactium™ (n = 12)	Crispies with lactium™ (n = 12)	Baked crispies with lactium™ (n = 12)
Mean ± SEM	100.75 ± 5.80	66.79 ± 5.52	65.88 ± 3.51	60.58 ± 2.93
ANOVA F(3.44)=15.89; P<0.0001 Dunnett's t test (vs. Vehicle) Significance		t=4.24 P<0.001	t=5.14 P<0.001	t=6.18 P<0.001





3- COMMENTS

- Both crispies and baked crispies containing lactium™, orally administered, significantly decrease the global score of anxiety of rats submitted to a conditioned defensive burying test in comparison with vehicle.



CONCLUSIONS :

- ✓ lactium™ is still bio-active in crispies and baked crispies.
- ✓ the extrusion and baking processes do not decrease the bio-activity of lactium™.