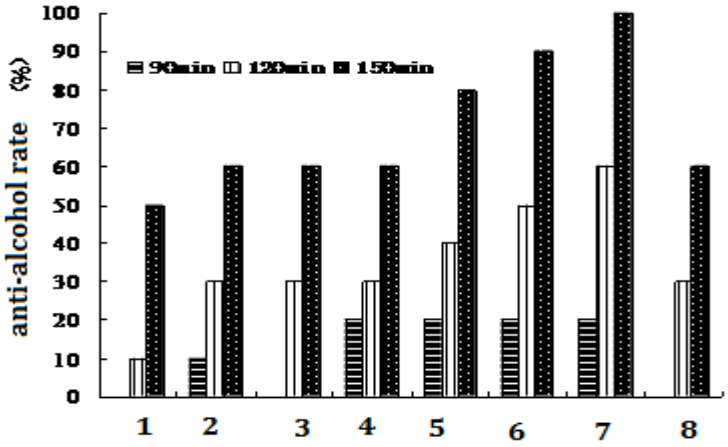
Comparison Study on Anticlcoholism Effects of different Kinds of Pectins

Objective: Study on different kinds pectins in comparing the different effects of antialcoholism. Methods: Takes ICR mouse certain, according to pectin grouping, through the experiment of antialcoholism,the experiment of avoid be drunk observes each pectin to the different effects of antialcoholism. Results: the effects of antialcoholism and avoid be drunk from high to low in turn is the medium dose pectin with low degree of esterification and low molecular weight〉low dose pectin with low degree of esterification and low molecular weight〉pectin with low degree of esterification and macromolecule〉pectin with high degree of esterification and macromolecule〉HAI WANG JIN ZUN〉galacturonic acid=glucose〉physiological saline; the effects of avoid be drunk from high to low in turn is the medium dose pectin with low degree of esterification and macromolecule〉HAI WANG JIN ZUN 〉low dose pectin with low degree of esterification and macromolecule〉glucose= pectin with low degree of esterification and low molecular weight 〉pectin with high degree of esterification and macromolecule= galacturonic acid〉physiological saline. Conclustion: The pectin with low dose pectin with low degree of esterification and macromolecule has a better effect on avoid be drunk than other kinds of pectins. The pectin of the antialcoholism effects has relationship with its esterification degree and molecular weight. Dose-effect relationship of low degree of esterification and macromolecule with its antialcoholism effects.

The results of antialcohol effects of modified pectin

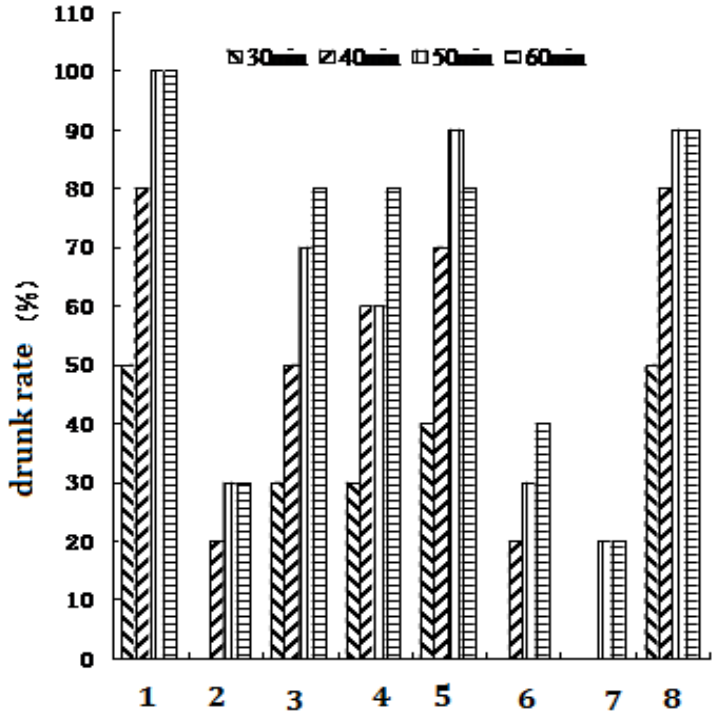
From the figure A, we can draw an conclusion that" the effects of antialcoholism and avoid be drunk from high to low in turn is the medium dose pectin with low degree of esterification and low molecular weight〉low dose pectin with low degree of esterification and low molecular weight〉pectin with low degree of esterification and macromolecule〉pectin with high degree of esterification and macromolecule〉HAI WANG JIN ZUN〉galacturonic acid=glucose〉physiological saline.



1 physiological saline 2 HAI WANG JIN ZUN 3 glucose 4 pectin with high degree of esterification and macromolecule 5 pectin with low degree of esterification and macromolecule 6 low dose pectin with low degree of esterification and low molecular weight 7 middle dose pectin with low degree of esterification and low molecular weight 8 galacturonic acid

Fig A： Anticlcholism experiment of different pectins comparison

From the figure B, we can draw an conclusion that the effects of avoid be drunk from high to low in turn is the medium dose pectin with low degree of esterification and macromolecule〉HAI WANG JIN ZUN 〉low dose pectin with low degree of esterification and macromolecule〉glucose= pectin with low degree of esterification and low molecular weight 〉pectin with high degree of esterification and macromolecule= galacturonic acid〉physiological saline.



1 physiological saline 2 HAI WANG JIN ZUN 3 pectin with low degree of

esterification and low molecular weight 4 glucose　5 galacturonic acid 6 low dose pectin with low degree of esterification and macromolecule　7 middle dose pectin with low degree of esterification and macromolecular　8 pectin with high degree of esterification and macromolecule

FigB：　Avoid be drunk experiment of different pectins comparison

Tab 1 The effectsof different pectins on the GSH、MDA content & ADH activity of mouse liver（x±s，n=10）

group	*MDA* *nmol/mg*	*GSH* *mg/g*	*ADH* *U/mg*
Nomal	3.14±0.45	27.68±1.76	3.10±0.68
Drunk model	4.02±0.48**	23.59±1.89**	2.01±0.43**
HAIWANG JINZUN	3.68±0.64	25.87±1.84	2.86±0.83$^{\#}$
glucose	3.89±0.72	24.58±1.66	2.25±0.79
pectin with high degree of esterification and macromolecule	3.75±0.73	25.46±1.58	2.52±0.74
pectin with low degree of esterification and macromolecule	3.48±0.64$^{\#}$	26.95±1.86$^{\#}$	2.87±0.84$^{\#}$
low dose pectin with low degree of esterification and low molecular	3.42±0.67$^{\#\#}$	27.61±1.92$^{\#}$	2.96±0.81$^{\#}$
middle dose pectin with low degree of esterification and low molecular	3.28±0.73$^{\#\#}$	28.12±1.78$^{\#}$	3.02±0.88$^{\#}$
galacturonic acid	3.86±0.74	24.62±1.75	2.21±0.76

$^{\#\#}P < 0.01$，　$^{\#}P < 0.05$

Zhejiang University Pharmaceutical Engineering Institute

Li Yinghua PhD