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| --- | --- | --- | --- | --- | --- | --- | --- |
| Table I Changes of SOD1 (CuZn superoxide dismutase), CAT (catalase) and GST (glutathione-S-transferase) activities in erythrocyte lysate after treatment of erythrocytes with different pesticides *in vitro*. | | | | | | | |
|  |  |  |  |  | Change of activity |  |  |
| Sample | Type of pesticides | Conditions of treatment | Dose range | CAT | SOD1 | GST | References |
|  |  |  |  |  |  |  |  |
| Human erythrocytes | Clomazone Isoxazolidinone herbicide | 1h, 37oC | 0, 100, 250 and 500 μg/L | CAT activity decreased at all concentrations tested | Increased SOD1 activity at lower concentrations and a decrease at the highest concentration of insecticide | - | 16 |
| Human erythrocytes | Trichlorfon Organophosphorus insecticide | 1h, 37oC | 8, 12, 16, 20, 40, 60, 80 mg/L | CAT activity increased | SOD1 activity increased | - | 19 |
| Human erythrocytes | beta-Cyfluthrin  Pyrethroid insecticide | 4h, 37oC | 43, 215, 1075 μg/L | CAT activity decreased | Increased SOD1 activity at lower concentrations and a decrease at the highest concentration of insecticide | - | 20 |
| Human erythrocytes | Chlorpyrifos-ethyl  Organophosphate insecticide | 0,30,60,120,240 min; 4oC | 0.4, 2, 10, 50, 100 g/L  and 0.01, 0.1 g/L | CAT activity decreased at all incubation period | Decreased SOD1 activity at high dose range at all incubation periods and increased activity at low dose range | - | 21 |
| Human erythrocytes | Diazinon  Organophosphate  Insecticide | 0,60,180 min; 4ºC | 0.0033, 0.033, 0.33, 3.3 and 33 mmol/L | CAT activity remained  unchanged | SOD1 activity increased | - | 22 |
| Rabbit erythrocytes | Lambda-cyhalothrin  Synthetic pyrethroids  Insecticide | 4 h, 37oC | 0, 0.1, 0.5, 1, 2.5 and 5 mmol/L | Decrease in CAT activity | Decrease in SOD1 activity | Decrease in GST activity | 11 |
| Rats erythrocytes | Endosulfan -  Organochlorine insecticide and acaricide  Chlorpyrifos-organophosphorus insecticide | 3h, 37oC | 1 μg/L | CAT was significantly decreased | SOD1 was significantly decreased | GST was increased in comparison to control values | 12 |