

Detection of saxitoxin using oligonucleotide as sensing element and organic dye as reporter part

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Saxitoxin is a neuron toxin which can block the sodium channel interfering the sodium reflux. It can induce paralysis or even death. It has bioaccumulation effect and cannot be easily get rid of by simple baking. Therefore, the detection of saxitoxin is in great need. Through the study of interaction between designed oligonucleotide and saxitoxin in both structural and thermodynamic ways, we found out that the existence of saxitoxin can effectively interfere the formation of oligonucleotide using organic dye, the concentration of saxitoxin can be indirectly reflected. This method offers simple preparation and easy operation and has the potential application in daily life usage.

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