

sample name	YEARUP DISINFECTANT TABLETS	Sample date	29-02-2020
Test items	Identification test of residual disinfectant chemical neutralization method, virus inactivation test	Date of completion of inspection	16-03-2020

first. equipment:

1. Test sample: YEARUP disinfection tablet.
2. Virus name and host: poliovirus-type I vaccine strain vero cells.
3. Instrument name and serial number: low temperature thermostat DKB-1915 (QFM-b-P014), inverted microscope (QFM-B-B012), biological safety cabinet (QFM-B-B031), Carbon dioxide incubator (QFM-B B004).

two. method:

1. Inspection basis: "Disinfection Technical Specification" 2002 Edition Diao 2.1.1, 10.5 The identification test of the chemical neutralization method of residual disinfectant, the concentration of the sample

100mg/L, the action time is 1min, the test is divided into 6 groups according to the standard requirements; according to the 2002 edition of the "Disinfection Technical Specification", 2.1, 10.7 polio virus inactivation test, the concentration of the sample is 100mg/L, and the action time is respectively 5min, 10min, 15min, the test was repeated 3 times.

The test temperature is $20^{\circ}\text{C}\pm 1^{\circ}\text{C}$.

2. Neutralizer: PBS containing 3% Tween 0.5, sodium thiosulfate, 0.5% histidine, 0.5% peptone, 0.85% sodium chloride, 1.43% lecithin, 0.1% cysteine Solution.

3. Laboratory environment: temperature: 20.7°C , relative humidity: 56%.

Third. result:

1. Identification test of the chemical neutralization method of residual disinfectant

Experimental virus and host	Experimental strain	Group	The logarithm of virus titer of each group in each test (Lgtcid ₅₀ /ml)		
			Test one	Test two	Test three
Poliovirus-I vaccine strain host name: Vero cell	100mg/l 1min	Group 1 Disinfectant + virus suspension	<1.5	<1.5	<1.5
		Group 2 (Disinfectant + virus suspension) neutralizer	2.43	2.33	2.29
		Group 3 Neutralizer + virus suspension	6.20	6.20	6.12
		Group 4 (Disinfectant + neutralizer) virus suspension	6.12	6.20	6.20
		Group 5 Virus suspension	6.12	6.29	6.00
		Group 6 Cells not inoculated with virus	Grow well		
		Experimental conclusion: The test result shows that the tested neutralizer is qualified.			

2. Virus inactivation test

Experimental virus and host	Concentration and time of action	Group	Log virus titer (Lgtcid ₅₀ /ml)	Mean logarithmic virus titer (Lgtcid ₅₀ /ml)	Average total number of viruses (Tcid ₅₀ /ml)	Average log inactivation value (KL)	Virus inactivation rate (%)
Host name of poliovirus vaccine strain: Vero cell	100mg/l 5min	Control group 1	6.20	6.23	1.71×10 ⁶	>4.73	>99.99
		Control group 2	6.29				
		Control group 3	6.20				
		Control group 1	<1.50	<1.50	<31.6	>4.76	>99.99
		Control group 2	<1.50				
		Control group 3	<1.50				
	100mg/l 10min	Control group 1	6.29	6.26	1.83×10 ⁶	>4.77	>99.99
		Control group 2	6.29				
		Control group 3	6.20				
		Test	<1.50				

	100mg/l\15min	group 1		<1.50	<31.6		
		Test group 2	<1.50				
		Test group 3	<1.50	6.27	1.89×10 ⁶		
		Control group 1	6.20	<1.50	<31.6		
		Control group 2	6.33				
		Control group 3	6.29				
	Test group 1	<1.50					
	Test group 2	<1.50					
	Test group 3	<1.50					

*The negative control group cells grow well, and the test results meet all the conditions specified in the evaluation.

Four. in conclusion

1. Identification test of the chemical neutralization method of residual disinfectant: containing 3% Tween-80, 0.5% L sodium thiosulfate, 0.5% L histidine, 0.5 peptone, 0.85% sodium chloride, 1.43% lecithin, 0.1% cysteine in PBS solution can effectively neutralize "Yanyuan Disinfectant Phoenix Biokill Tablets"

(Action concentration 100mg/L), and the neutralizer and neutralization products have no adverse effects on poliovirus.

2. Virus inactivation test: The concentration of this sample is 100mg/L, the action time is 10min, 15min, the test is repeated 3 times, the average logarithmic value of inactivation of polio virus is >5.73 >5.76 respectively And) 5,77 which meets the standard requirements of 2.1.1.10.7 of the 2002 edition of the "Technical Specification for Disinfection" (average logarithmic value of inactivation ≥ 5,00).