

POOL WATER DISINFECTION

Characteristics		Efficiency of various means of disinfecting water in swimming pools				
		hardware		reagental		
		ozonization	Ultraviolet (UV)	Cl- containing	Based on active oxygen	DEZAVID
1. Activity against	Bacteria	moderate	moderate	excellent	moderate	excellent
	Spore-forming bacteria	moderate	moderate	moderate	moderate	excellent
	Viruses	moderate	moderate	moderate	moderate	excellent
	Fungi	moderate	moderate	moderate	moderate	excellent
	Green algae	moderate	moderate	moderate	moderate	excellent
	Legionella pneumophila	moderate	moderate	moderate	moderate	excellent
2.	Sufficient or need an augmentation	ozone+ Cl ozone+ UV+Cl	UV+ ozone UV+Cl UV+ ozone +Cl	self-sufficient	periodically substantial chlorination is required	self-sufficient
3. Organoleptics	Color elimination	good	low	no	good	excellent
	Scent elimination	good	low	no	good	excellent
	Turbidity reduction	good	low	no	good	excellent
	Reduction of Maximum Permissible Concentration (MPC) of Cl index	good *	low *	no	good	excellent
	Appearance of disinfection by-products	yes*	yes*	yes	yes*	no
4.	Necessity of PH adjustment	yes	yes	yes	yes	no
5. Toxicity	Influence upon skin and mucous membrane	moderate > 0,15 mg/l	moderate*	evident	moderate *	no
	Mutagenic and carcinogenic effects	detected*	detected*	detected*	detected*	no
	Embryotoxic effect	detected*	detected*	detected*	detected*	no
	Risk of inhalation effect	detected*	detected*	detected*	detected*	no
	Effect on materials	detected*	detected*	detected*	detected*	no
	Risk of overdose	hazardous > 0,15 mg/l	low-hazard	hazardous	low-hazard	safe
	Risk of inhalation effect (leakage)	hazardous MPC 100 - 214 mcg/m ³	safe	hazardous	low-hazard	safe
6.	Effect duration	no	no	sustained	sustained (in combination with algaecide and coagulant)	sustained
7.	Required application frequency	permanently	permanently	daily	once in 5 - 7 days	once in 7 - 14 days
8.	Amount of reagent remaining in water by the next application	----	----	0 – 20%	0 – 10%	50 – 70%
9.	Required application frequency if the temperature regime increases	----	----	grows	grows	remains stable
10.	Power consumption	high	high	moderate	high	no
11.	Production, maintenance, transportation and storage requirements	high	high	high	moderate	no particular requirements

* on condition of using along with Cl for maintaining necessary sanitary regime of water

The table is made according to materials published in the "BanBas", "Vodoley", "Basseyni y Bani" magazines and scientific reports of GU SRI (Scientific Research Institute) of Hygiene and Environment Ecology named after A. Sysin PAMN.