

# Control of dosing and diluting and use of chemicals (quantity optimisation) by a suitable staff member

*Ensure that a well trained staff member controls dosing, diluting and use of chemicals.*

## Introduction:

Chemicals are often delivered in bulk and as concentrates. They perform most effectively when properly diluted and applied. Disinfectants need to be diluted correctly for proper germ killing performance while not placing an unnecessary chemical load burden on the receiving environment. Overdosing of chemicals is wasteful, and underdosing can lead to contamination and an ineffective cleaning operation.

Hence, a well trained cleaning staff member has to be identified for the ongoing dilution and proper administration of all cleaning chemicals used. Such a person needs to know how the strength or concentration of each of the chemicals is properly prepared. If, for example, a 1:10 dilution rate is called for, this means that 1 part of the concentrate needs to be mixed with 9 parts of water (1+9). In other words, should a finally diluted chemical volume of 5 litres be required, a total of 500 ml of concentrate would have to be mixed with 4.5 litres of water.

After the dilution process, containers should be well labeled with the chemical name, solution strength (percentage or %), active chemical ingredients and date of preparation. Dosing equipment, such as dispenser measuring cups, further assist in not using expensive and often environmentally harmful chemicals unnecessarily.

## *Major benefits of proper dilution and controlling chemical dosage:*

- Superior performance and most effective cleaning properties
- Reducing any unnecessary environmental burden of the chemicals on the receiving environment
- Less risk of skin burns or other health impacts when handling properly diluted chemicals with corrosive, acidic or caustic properties
- Financial savings by using less chemicals
- Reduction in damaged surfaces and fabrics

### Typical Environmental Savings:

Protect the receiving environment from unnecessary harm

### Capital Costs:

About 20 Rand to buy an empty chemical dispenser bottle or measuring cup. Some chemicals (e.g. as typically used in the kitchen for dishwashing and cleaning) are provided by the supplier with automatic dilution equipment for free.

### Typical Payback Period:

Immediate

### Did you know?

Inappropriate dosage of chemicals can kill people, animals and plants

Phosphates (which contain phosphorus) are used in laundry detergents to soften the water and help keep extracted dirt from being redeposited onto your washing. In the environment, however, high levels of phosphorus can cause eutrophication — excessive growth of blue-green algae in inland waterways, which can clog rivers and restrict light and oxygen availability to other plant and animal life. It can also make the water toxic to humans and aquatic life.



Automatic dilution system as provided by chemical supplier



Cd instructing staff on correct dosage



Manual dispenser unit and chemical measuring cup