

PAPER 8 TEST
POOL WATER TESTING AND DOSING EQUIPMENT

Your Name _____
Don't write in score boxes

In New Zealand metropolitan areas, much of the town supply water comes from
1. _____ which is preminantely 2. _____ so is
effectively 3. _____ water, and there is a wide range in the quality of the
make-up wate, so 4. _____ must take place.

Using this water to fill a residential swimming pool:
The First step is to 5. _____, then the Second step is that the pool water
6. _____. Third and Fourth steps are to 7. _____
and 8. _____ then the resulting water has to be 9. _____.

Sampling is very important. Ideally the filter should be operating and the water is to be thoroughly mixed before taking the sample, however, this is not always possible.

Consideration should be that a small volume of the sample represents 50, 60 or even many more thousands of litres of water. Thus one or more representative samples should be taken as the accuracy of the test results depends on the samples.

DOs and DON'Ts of chemical testing:

10. Test reagents should be _____.
11. Chemicals and the coloured test comparator should be stored _____
12. Chemicals should not be _____
13. Don't _____, as many of the chemicals are _____
14. _____
15. Tested samples should be disposed of _____
16. And never _____
17. Should Children and immature teenagers be allowed to handle the test reagents? _____.

Which tests are carried out routinely to test residential pool water?

18. To determine chlorine or bromine levels, use _____ tablets

There are ion-selective electrodes to determine chlorine and bromine, however, the equipment requires careful calibration which is beyond the capability of the pool shops. Also there are little bimetallic gadgets to determine chlorine. These were found completely useless, they should not be used or sold.

19. For Polymeric Biguanide, use _____
20. Hydrogen Peroxide? _____
21. Total Alkalinity? Step (a) Add _____ to _____
(b) Add _____ to _____

(c) then _____

22. pH can be measured by using _____ or _____

23. The coloured pH indicator most frequently used is _____

24. What colours develop by this test at the following pH levels: 6.8 _____ and 8.2 _____

Since some of the older fibreglass pools have to be maintained at pH 6.8 to avoid the appearance of black stains, what indicator is recommended instead of the traditional testing agent?

25. _____

An electronic pH meter consists of a millivolt meter which is calibrated to read pH values and a probe which consists of a _____

26 A Calcium Hardness test kit consists

of: _____

Cyanuric Acid test kit (This test is not usually provided to the home pool owners)

27 A sample of the pool water is mixed with the reagent which will produce

28 Pool Water Temperature is measured with _____

29 Total dissolved solids are measured either a _____
or with a _____

30 What does this test NOT tell you? _____

Salt water content determination.

31 This value is important for the efficient operation of the salt water chlorinators.

The yellow indicator solution is (a) _____ which turns (b) _____
(colour) when enough drops were added to the water sample.

The multiplying factor is usually (c) _____. Care should be taken with the reagent solution as it is affected by light and thus it should be kept in the dark when not in use.

Also apart from being poisonous, it stains the skin,.

32 Automatic Dosing Equipment

Describe Chlorine dispensing equipment. [Multiple answers]

- 33 The typical dosing pump is called a _____ type pump
- 34 Chlorine is created electrostatically by _____
- 35 What happens to the pool water pH when an electrostatic device is used?

- 36 What have the manufacturers of these devices done to combat this situation?

- 37 What is the simplest (and cheapest) product that feeds chlorine into a pool?

- 38 This device uses _____ tablets which have a pH of _____

NOTE: The tablet dispensers should be used with the slow dissolving tablets only, NOT with granular chlorine. Also mixing of two different chlorine compounds should be avoided as serious accidents and explosion can occur.

pH controlling equipment

- 39 This unit measures the pH of the water and if the pH is higher than the preselected value it _____ to the pool water.
- 40 These units which inject the acid into the suction line (a) before or (b) after the filter and any heating equipment

ROUTINE POOL WATER MAINTENANCE (Describe what treatments are neededin an ideal world!)

- 41 DAILY
- (a) _____
- (b) _____
- (c) _____

- 42 WEEKLY iin addition to the daily routine
- (a) _____
- (b) _____
- (c) _____
- (d) _____

- 43 MONTHLY
- (a) _____
- (b) _____

44 OFF-SEASON when the pool is not being used

(a) _____

(b) _____

(c) _____

(d) When away _____

45 SPRING STARTUP: What is recommended?

(a) _____

(b) _____

(c) _____

(d) _____

-end-