



## Breakpoint Chlorination

This is our simple explanation of break point chlorination, as the theory involved is quite complex.

All Chlorine reacts with any organic materials present until they are destroyed.

Chlorine then reacts with amino acids or urea.

These compounds come from proteins or from urine in pool water.

The products of this reaction are called chloramines.

It is these products which give pools their characteristic smell.

There are three stages of chloramines:

- (a) Monochloramine (*0.4 PPM Combined Chlorine is maximum before you cause eyeburn*)
- (b) Dichloramine (*causes 'smell' and 'chlorine odour'*)
- (c) Trichloramine (*reduced oxidation, algae encouraged, time to Super Chlorinate!*)

The tri-chloramines are suspected of causing the most health and odour problems.

If more chlorine is added the chloramines are themselves broken down until there is nothing left to react.

At this point chlorine begins to appear as 'free chlorine residual'.

This point is termed 'breakpoint'.

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