

FORUM

EMPHASIS ENVIRONMENT

AIR POLLUTION

DETERGENTS

Synthetic detergents are an important source of our water pollution. They are an ever-increasing problem because the more they are improved, the more they pollute. Every few months more additives are put in, additives which won't break down in water.

One problem which has been worked on and solved is that of continuous sudsing. Prior to 1965, the suds would not break down, leaving deep layers of foam on our lakes and rivers. By law, the manufacturers were forced to make the detergents bio-degradable. Now micro-organisms can metabolize them so the agitation of the lakes and rivers no longer results in massive white foam.

The present pollution problem stems from the high phosphate content in the laundry detergents. The phosphate is important in the cleaning process because it softens the water by immobilizing the hard water ions, it reduces surface tension on the water and it suspends dirt particles. On the other hand, phosphate is very reactive and combines with many free ions, such as calcium and iron in water, to form a precipitate, a mass which settles rather than remaining suspended in solution. This can be seen as the sludge on river bottoms or the milky color in river

water near factories. The major problem with phosphate is its ability to fertilize water plants, especially algae. The algae grows so rapidly that at night when there is no sunlight, most of it dies. When the dead plants decompose, they use up valuable oxygen needed by other plants and animals. Consequently most of the life can no longer survive and the lake turns into an algae bed as Lake Erie did.

An article on Lake Erie in the October 20th, 1969 issue of *Chemical and Engineering News* stated that, "Control of phosphorous is the only effective remedial measure against eutrophication (un-natural aging of lakes) that can feasibly be undertaken at present." Since more than half the waste phosphorous comes from detergents, the detergents must be controlled. Researchers are working on possible substitutes for phosphate in detergent such as starch or citric acid. Meanwhile the consumer must do all he can to limit his output of waste phosphorous. If everyone used only the recommended amount of laundry detergent with each load, it would cut the waste by one third. However we can cut the amount of detergent used in each load by one fourth again without sacrificing the cleaning power of our detergent. One last way of lessening phosphate pollution is to check the accompanying table of detergents and begin using one with a low phosphate content. Remember, every little bit helps.

Cathy Popp

Find your detergent on the following list and do your part.

Detergent	Manufacturer	% Phosphate
Amway Tri Enzyme	Colgate-Palmolive	52.5
Axion	Colgate-Palmolive	43.7
Biz	Proctor & Gamble	40.4
Bio-Ad	Colgate-Palmolive	35.5
Salvo	Proctor & Gamble	35.3
Oxydol	Proctor & Gamble	30.7
Fide	Proctor & Gamble	30.6
Bold	Proctor & Gamble	30.2
Ajax-Laundry	Colgate-Palmolive	28.2
Punch	Colgate-Palmolive	25.8
Drive	Lever Brothers	25.3
Dreft	Proctor & Gamble	24.5
Gain	Proctor & Gamble	24.4
Duz	Proctor & Gamble	23.1
Bonus	Proctor & Gamble	22.4
Cheer	Proctor & Gamble	22.3
Breeze	Lever Brothers	22.2
Fab	Colgate-Palmolive	21.6
Cold Power	Colgate-Palmolive	19.9
Cold Water All	Lever Brothers	9.8
Wisk	Lever Brothers	7.6
Diaper Pure	Boyle-Midwest, Inc.	5.0
Trend	Purex Corporation	1.4

Many industrial companies have come up with the statement that air pollution does not cause any type of disease. Well, to be quite frank, they are absolutely correct! There is no scientific proof that air pollution causes lung cancer or any other respiratory disease. However, the point that these corporations do not bring out is that even though air pollution does not cause any diseases, it can irritate a respiratory condition to such a great extent that it will result in unreparable damage and quite often death.

Anyone who has had a cold or the flu has the potential of dying from air pollution. When your body contracts a cold, it damages tissue in your lungs and bronchial tubes. This damage usually goes unnoticed and will eventually heal itself. However, if a person who has had a cold breathes contaminated air, the pollutants can obstruct the healing processes and eventually bring about chronic bronchitis, lung cancer, pulmonary emphysema, and death.

Many people in this area are under the impression that this unreparable damage can only happen in cities like Detroit, where the pollution conditions have reached the extreme. These people are greatly mistaken. In Alpena alone, there are 14,000 automobiles. Everyday they emit 40 tons of carbon monoxide, 5 tons of hydrocarbons, and approximately 2 tons of nitrogen oxides. That totals to almost 50 tons of pollutants released everyday in Alpena. This figure grows even larger when industrial wastes and other forms of pollution are added. It is quite obvious that the degree of polluted air we breath in Alpena is high enough to irritate any damaged tissue in our lungs.

Since we all have had our share of colds, this pollution problem affects every one of us, so it must be solved in the near future. We cannot let Industry play with our lives when they say that the problem will be cut by 50% in 1980. The problem must be solved now, before it's too late.

Cathy Stump

7 Ways to Prevent Air Pollution

1. Stop Smoking.
2. Report any occurrence of air pollution to your local air pollution control.
3. Install anti-pollution devices on cars.
4. Have car engines checked and tuned regularly.
5. Support local people working on anti-pollution.
6. Write letters to your congressman supporting stricter pollution laws.
7. GET INVOLVED!