

Can Pollution be controlled by Common Man?

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Abstract

The atmosphere, which makes up the largest fraction of the biosphere, is a dynamic system that continuously absorbs a wide range of solids, liquids and gases from both natural and man made sources. These substances travel through air, disperse and react with one another and with other substances both physically and chemically. Due to natural and man-made processes, a portion of these substances which interacts with environment to cause toxicity, disease, aesthetic distress, physiological effects or environmental decay, has been labeled by man as a pollutant.

Without water, survival of plants, Human Beings and animals is impossible in earth. Human beings uses water for different purposes like drinking, washing cloths and utensils, bathing, cleaning, for putting down fire etc. Water Demand in our country is 135 lpcd for domestic use. For industrial and commercial use an average of 20-25% may be allowed in the demand. The main sources of water are from ground, wells, springs and ponds etc. So water is very precious and should be carefully used.

Waste water if not properly treated results in water pollution. Water should be physically, chemically and biologically tolerable. Some of different methods for treating the waste water are chlorination, Screening, Grit chamber, Sedimentation tank, Activated sludge process, Primary Trickling filter, septic tank etc.

Lot of materials like Plastic, Glass, if not properly treated after its usage results in lot of pollution. Lot of times we observe that many materials are burnt on the land and in this process it leaves lot of toxic materials at the surface, which when mixed with water or air causes lot of diseases.

So there is a huge requirement of an apparatus which will actually measure the pollution level and treat the pollution.

This paper attempts to discuss with strategic issues related to design of such an apparatus and Marketing it.

Key Words: Pollution, Strategic Issues, Apparatus, Marketing

1. Introduction

But every person who can and does walk or ride a bike makes a difference in the amount of pollution emitted that day. Newly industrializing economies can experience rapid changes in ambient quality across air- and watersheds. Regulation should focus on adaptation to these rapid changes. Regulators should be empowered to counter environmental degradation by tightening existing regulations, but the system should also minimize disruption for investors. Adjustment rules should be transparent and linked to publicly available data on quality and emissions. So far, 15 manufacturers including Apple, Dell, HP, Lenovo, NEC, Sony and Toshiba, have EPEAT-registered computer products that have reduced levels of cadmium, lead and mercury. Plus, they are more energy efficient which reduces greenhouse gas emissions, and they are easier to upgrade and recycle. From conception to end-of-life, we have established environmentally conscious goals for designing new products. Basic environmental chemistry and biology and the effect of humans lays the groundwork for applying the Green Principles of designing safer chemicals and less hazardous chemical syntheses, designing for degradation, designing for energy efficiency, and developing real-time analysis for pollution prevention.

2. Study

A new product is needed which can fill the agricultural fields with phosphorous so that lands can become fertile. This should help patients to take pure water and pure air.

2.1 Phosphorous:

For example, 98% of the phosphorus in urine can be recovered by precipitation with magnesium. During the 2001-2002 hydrological year, an intensive investigation into the

magnitude of phosphorus and sediment transfers from field (0.15 km²), farm (0.62 km²) and landscape (84.50 km²) scale sub-catchments showed that total phosphorus transfers were 1.73, 1.82 and 2.50 kg/ha, respectively.

2.2 Chlorine:

Chlorine gas, also known as elemental chlorine, is a powerful oxidizing and disinfecting agent that is transported and stored as a liquefied gas under pressure. Several systems are available for disinfecting but chlorine gas is the most commonly used water disinfectant. When chlorine is added to water at the correct dosage, either in solution or in gaseous form, a part of chlorine is used, among other processes, to eliminate microorganisms. The rest of added chlorine remains in the water, guaranteeing its portability against accidental contamination of water supplies. A concentration of free residual chlorine greater than 0.5 mg/l and a minimum of 30 minutes actual contact time.

Chlorine level concentrations below 0.2 mg/l may not provide protection for health. So chlorine content in water supplies are maintained between 0.2 and 0.6 mg/l. Chlorine measurement, either with DPD method or with o-tolidine method, ranges 0.1-0.3-0.6-1.0-1.5 mg/l (ppm). In the presence of chlorine, DPD and o-tolidine react rapidly to form a pink and a yellow color respectively.

Chlorine gas is added at 84% if number of persons using it is greater than 10000 and at 61% if number of persons is less than 10000. Advantages of using Chlorine gas is it is highly effective against most pathogens, Provides “residual” protection required for drinking water, operationally the most reliable and generally the most cost-effective option. With the proper intake of healthy water, the right minerals and nutrients our body can overcome almost anything. Our brain is over 75% water and when it detects a shortage of available fluids it implements a water rationing process by producing histamines, causing pain and fatigue. This natural process is meant to slow us down and conserve water. Histamines are released as a warning signal that something is wrong.

Two cups of water and a 20 minute break will overcome most common headache pain. Back pain is also most often the result of a deficiency in body fluid levels. Hypertension is very often a result of the body adjusting to blood volume loss and most common cause of lower blood volume is dehydration. Since our blood is more than 83% water it's total volume is heavily affected by the level of available water in our body. Arthritis pain and stiffness is now understood to be initially a result of increased friction and swelling in the bone joints. The movement of the joints causes a suction that pulls water from the bone marrow to the joint cavity if there is available water. An increased intake of water and gentle rhythmic movements of the joints is a tool to overcome minor arthritic pain.

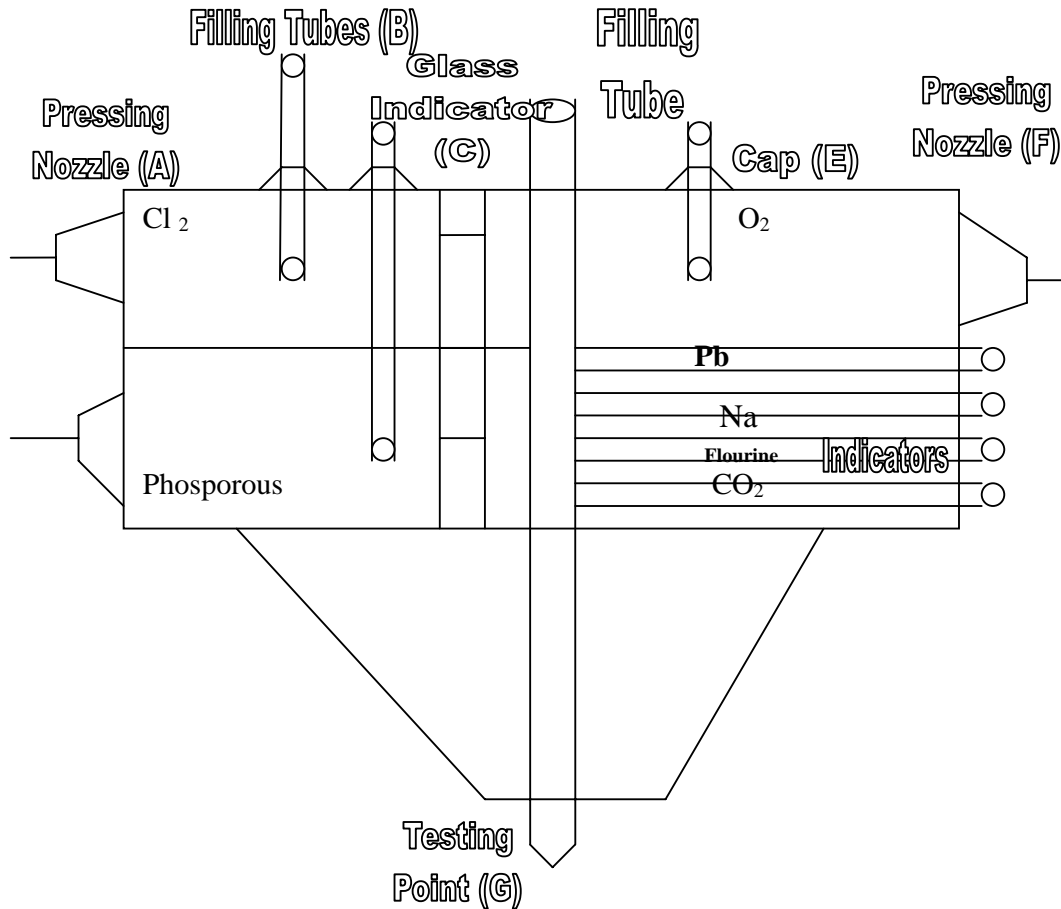
2.3 Oxygen:

The oxygen is a gas which human beings, animals and other living beings consume to keep themselves alive. Plants release oxygen during day time, which human beings consume. However during nights plants release carbon di oxide (CO₂) which will be harmful for human beings to consume.

2.4 Research:

The research was conducted with 50 farmers, 25 students, and 35 office employees using a questionnaire to find out the chlorine content, oxygen content, phosphorous content to be used indirectly by finding out what price farmers are prepared to pay for this product.

3. Model for Pollution Control Equipment



3.1 Product Specification:

Material Used : Stainless Steel and Glass
 Estimated Life : 2-3 years
 Dimensions: (H) 25" X (L) 20" X (W) 5"
 Weight: 2 Kg (with Filled in gases and Chemicals)
 Chlorine Used: 50 Grams
 Oxygen used: 200 ml
 Phosphorous liquid: 500 ml
 Price of the product: Rs 2000

3.2 Utility of the product:

- The product can be used, when people can go on excursions, office visits and other outings.
- This product can be used by farmers, for making their fields fertile using phosphorous.
- The product can be used by normal household for disinfecting their drinking water.
- The product can be used by patients who need artificial respiration frequently.

3.3 Strategic Issues:

- The product can be promoted by giving advertisement more in News Papers and Radio at beginning.



- The distribution Channels which are used for distributing FMCG goods can be used for distributing this product.
- Awareness Camps should be conducted both at city level and at village level.
- The product maintenance centers should be established for every 50 kms-one..
- The product can be recommended by doctors.
- Customers should be given special prizes, and special discounts in their subsequent purchases.

4. Scope for future Research:

- The Further research may be conducted to find out to make the product with still lighter material, so that product is still lighter to carry and is available for still lower price.
- Further Research may be carried out in the direction of streamlining the mechanism used for measuring Chlorine content, oxygen content and phosphorous content available in the environmental system and the product.

5. Conclusion:

Thus this product is extensively useful for Household, Patients and especially farmers and will be successfully in the market if properly targeted with the concerned segment as specified.

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