



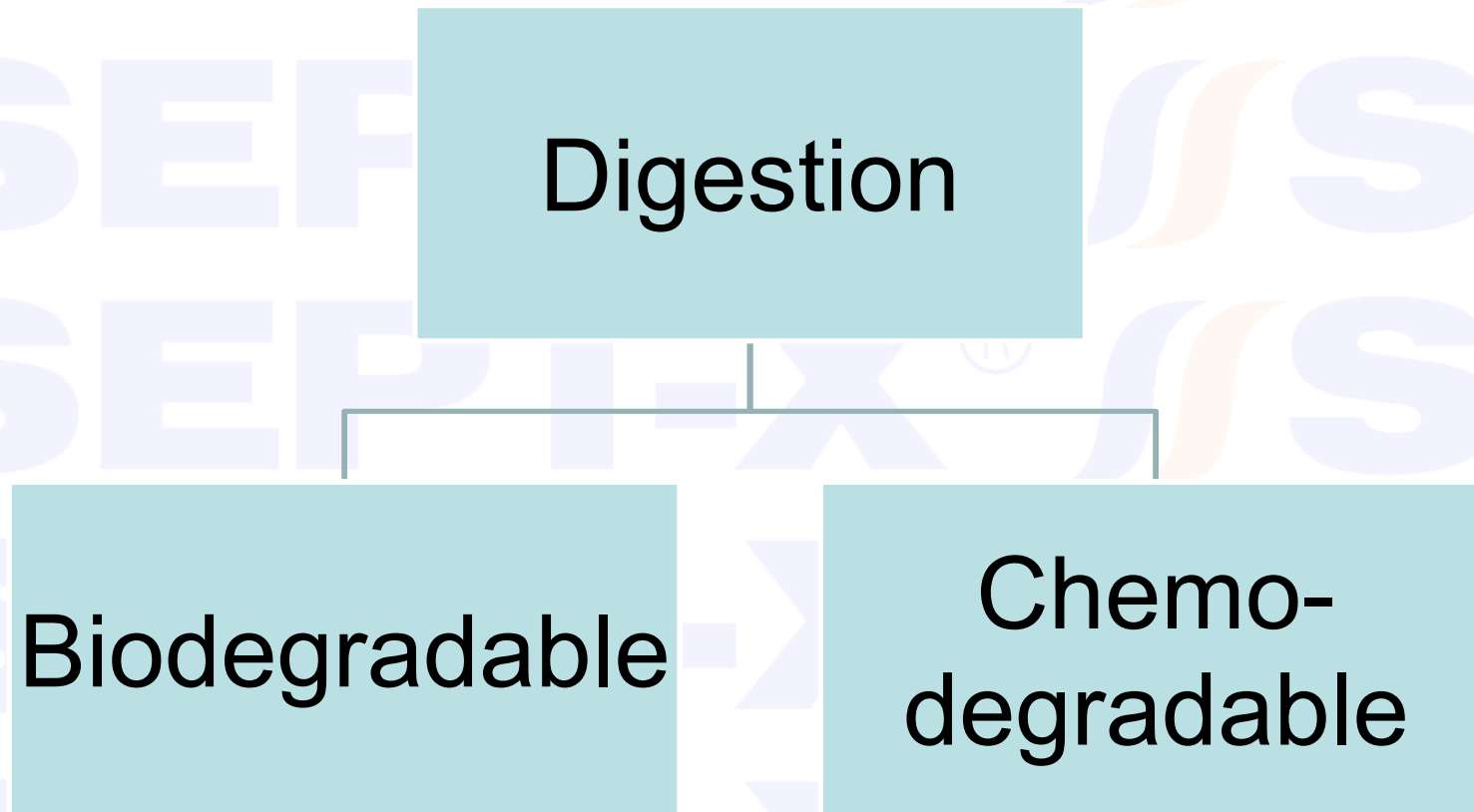
Waste Water Treatment Biotechnology Solution

Part II

Developed by



Overview



Fundamentals of digestion

- Raw material (substance)
- Enzyme
- End products



Substances

Substance

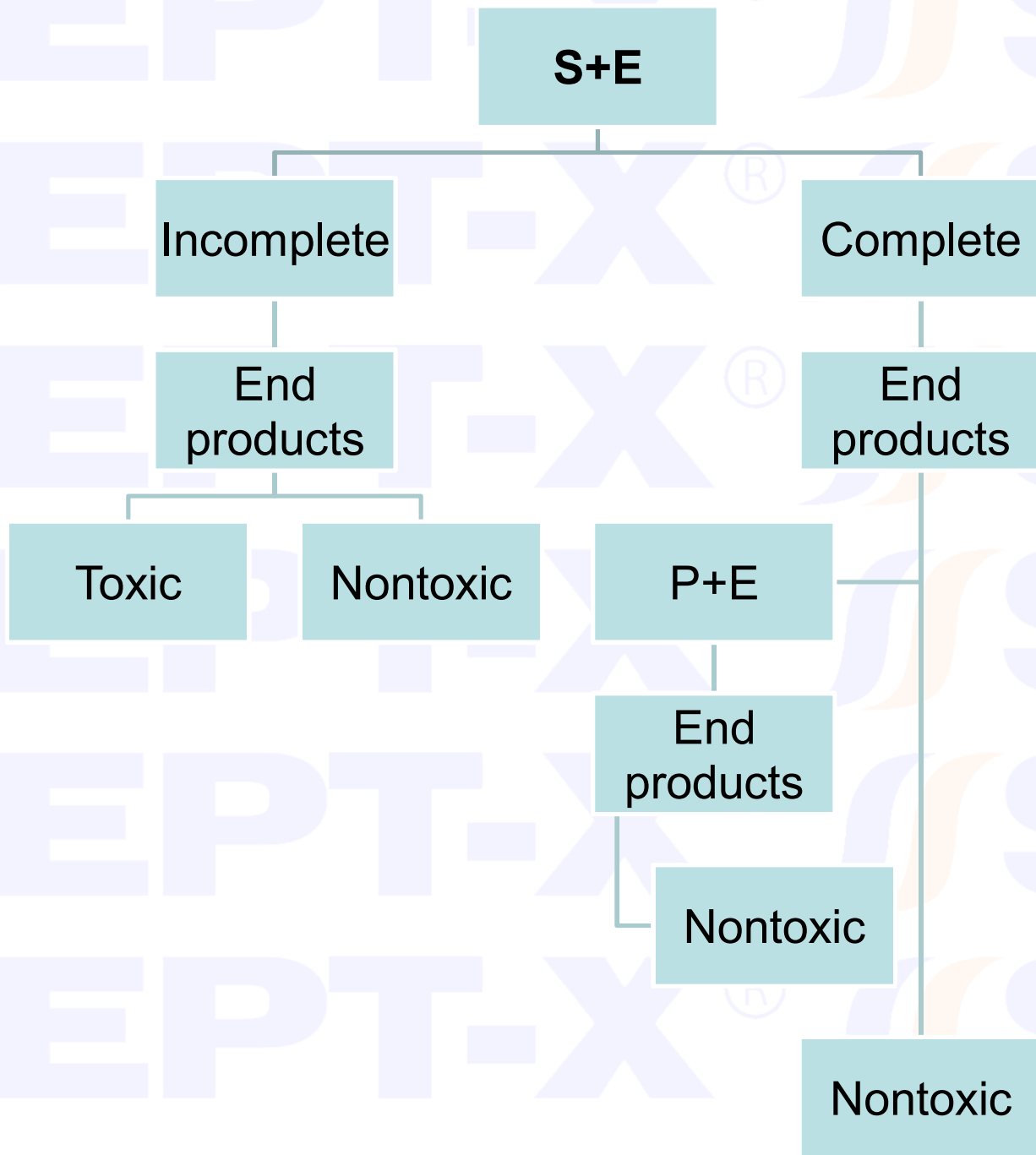
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graph TD; Substance[Substance] --- Organic[Organic]; Substance --- Inorganic[Inorganic];
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Organic

Inorganic

Enzyme rules

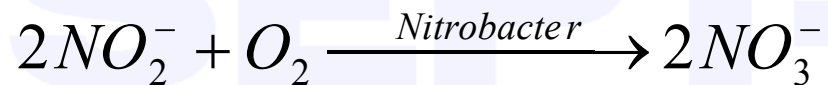
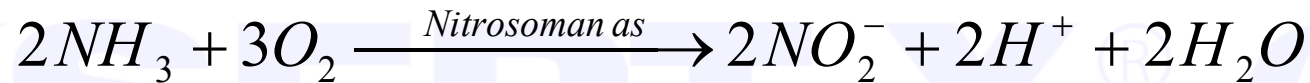
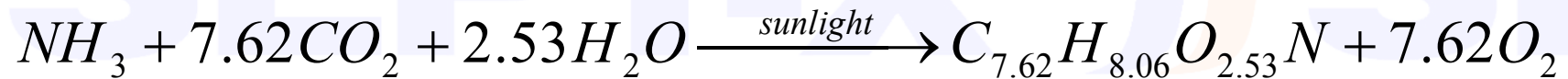
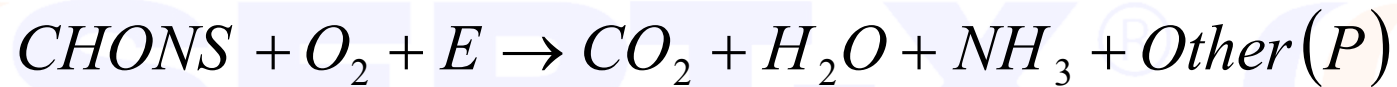
- Inter locking reaction
- One substance-One enzyme
- May be more than 1 step
- Right enzyme is complete digestion
- Complete digestion is nontoxic end products
- Environmental conditions



Environmental conditions

- Temperature
- pH
- Detention time
- Oxygen requirement
 - Aerobic condition
 - Anoxic condition
 - Anaerobic condition

Required digestion

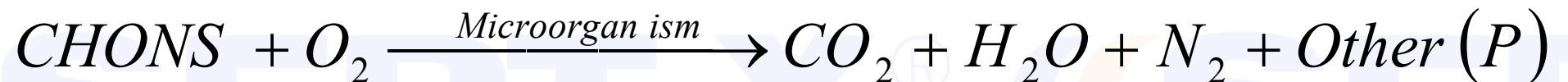


Problems of incomplete digestion

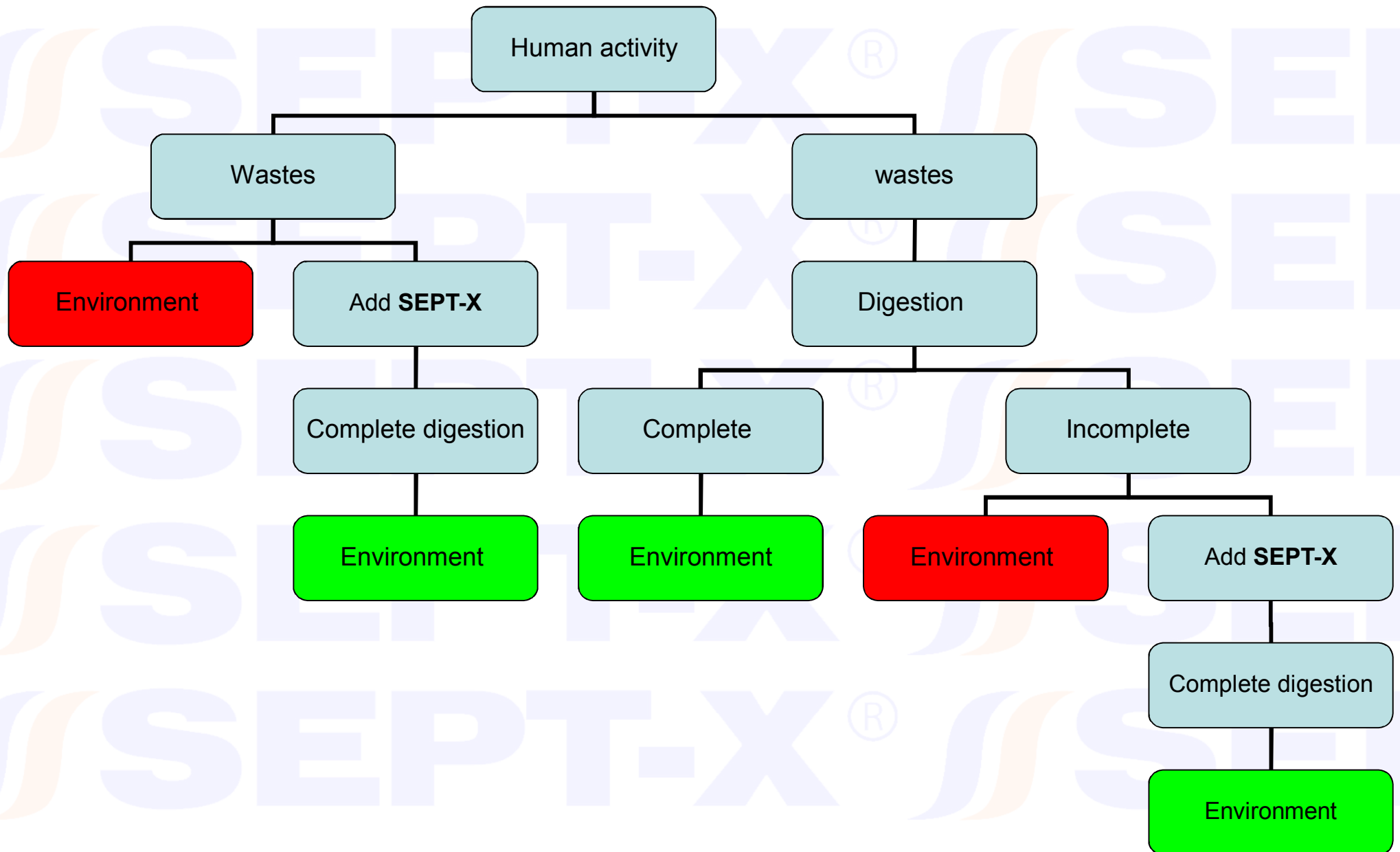
- Toxic substances
- Odor
- System quality

Functions of SEPT-X

- Build up the absently right enzyme
- Make a complete digestion
- Make non toxic end products



Application of Bio-wish for Environment



What are the differences between **SEPT-X** and chemo-digestion

SEPT-X

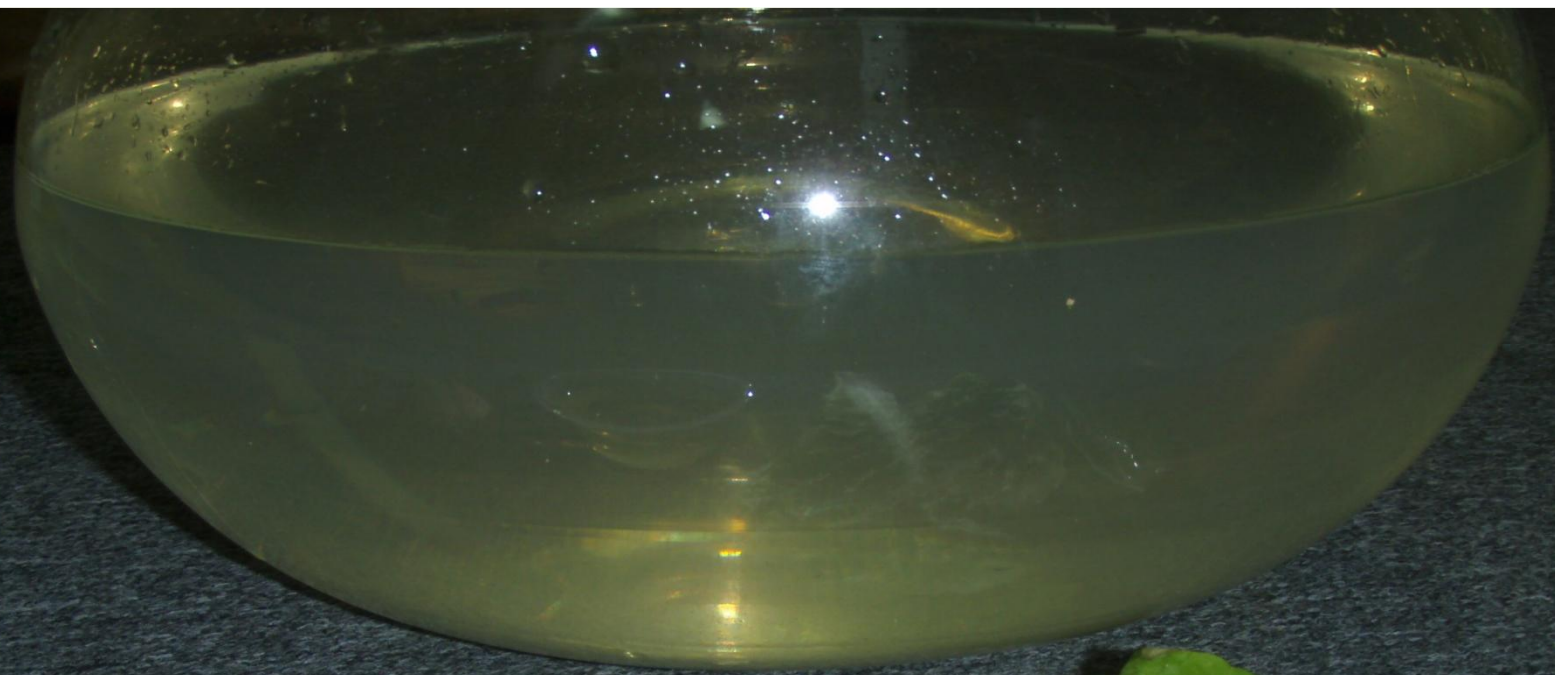
- Biological treatment
- Right enzyme
- React at substances
- Complete digestion
- Nontoxic end products
- Non side effects
- Not require further processing

Chemo-digestion

- Chemical treatment
- React at products
- Not sure that is complete digestion
- Not sure the products are nontoxic
- May be has side effects
- Require further processing

Expectations

- Make completely digest condition for environment.
- Make complete digestion in human body.
- Decrease toxic substances from chemo-digestion.
- Reduce the usage of chemical substances
- Make a biological system for sustainable environment.
- Make the right solution for treatment.



1st Day



2nd Day



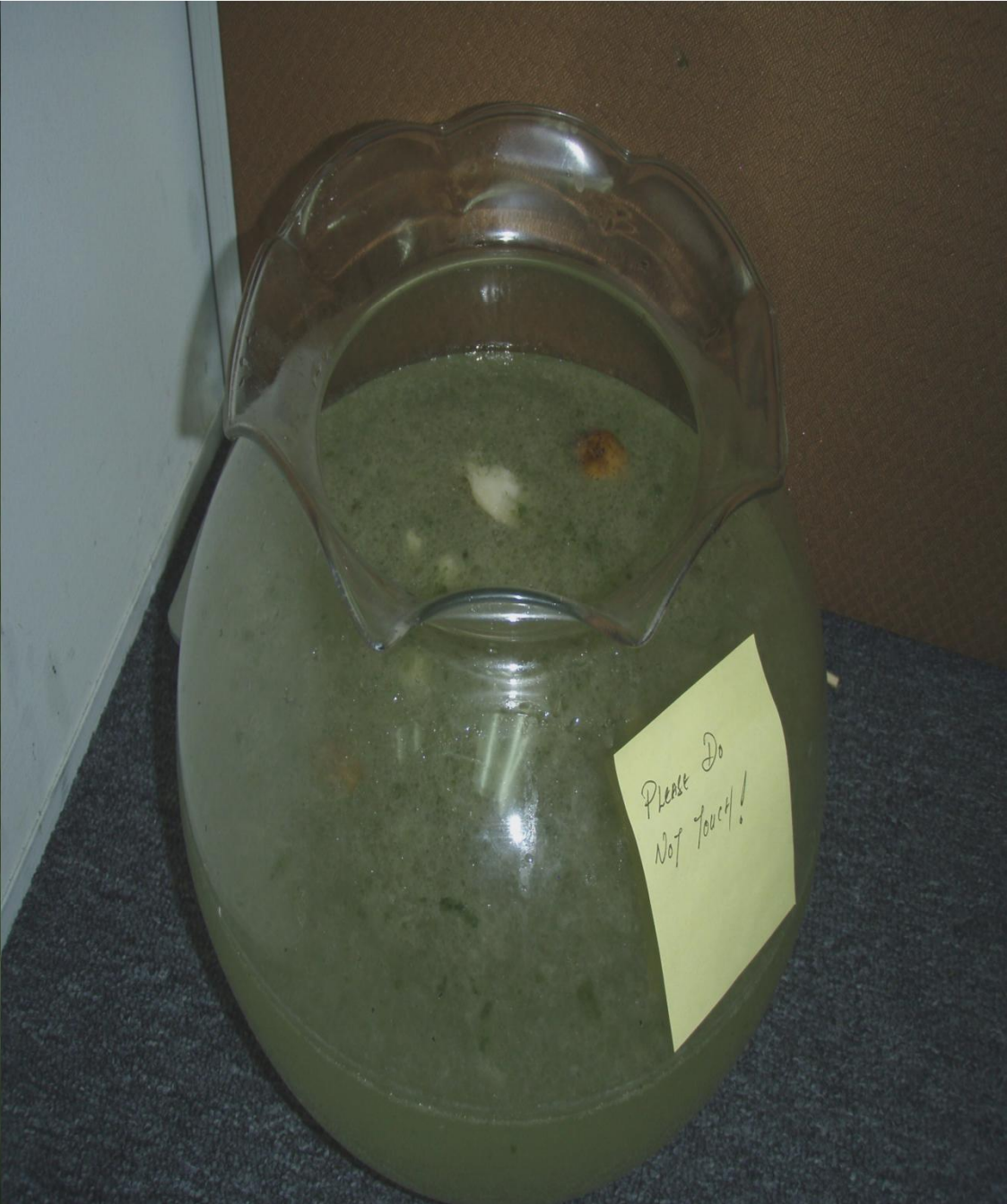
3rd Day



4th Day



5th Day



The background features a repeating pattern of the 'SEPT-X' logo, which consists of three stylized, overlapping curved lines in blue and orange, followed by the text 'SEPT-X' in a bold, sans-serif font with a registered trademark symbol. To the right of this is the text 'SEP' in a similar font. A large, solid teal rectangle is positioned in the center of the page, containing the text 'CASE REFERENCE' in a bold, dark blue, sans-serif font.

CASE REFERENCE

Air Quality Emission

Eliminate and control wide range of volatile organic odors including

- mercaptans,
- amines,
- ammonia,
- hydrogen sulfide



Benefits

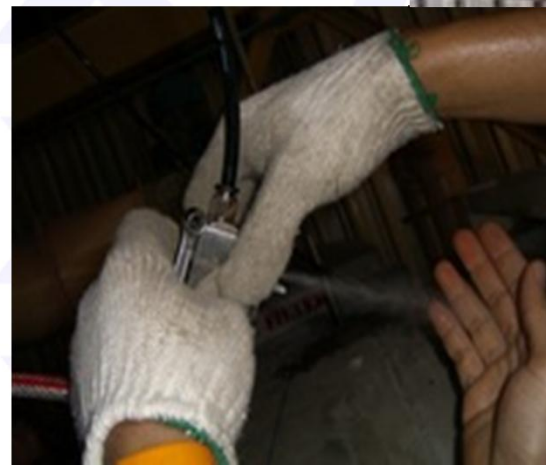
1. Rapid reduction of odor emissions **“Green air quality”**
2. Elimination of odors molecules upon contact
3. Effective on wide range of VOC's
4. Effective in high volume air stream
5. Simple continuous application
6. Decrease scum accumulate in smoke stack and decrease cleansing cost
7. Safe to use
8. Highly cost effective

Odor Control – Air Quality Emission

- Dry wind output of 24,000 m³ per hour (900mm diameter, 3 meter stack long)
- SEPT-X has been applied via a 1,000 psi, low volume misting system into the stack.
- SEPT-X was mixed into solution and applied at 100 gm into a 200 L reservoir (500 ppm).

The solution was then delivered via 8 nozzles in spiral formation along the stack at 6.25 L of solution per nozzle per hour.

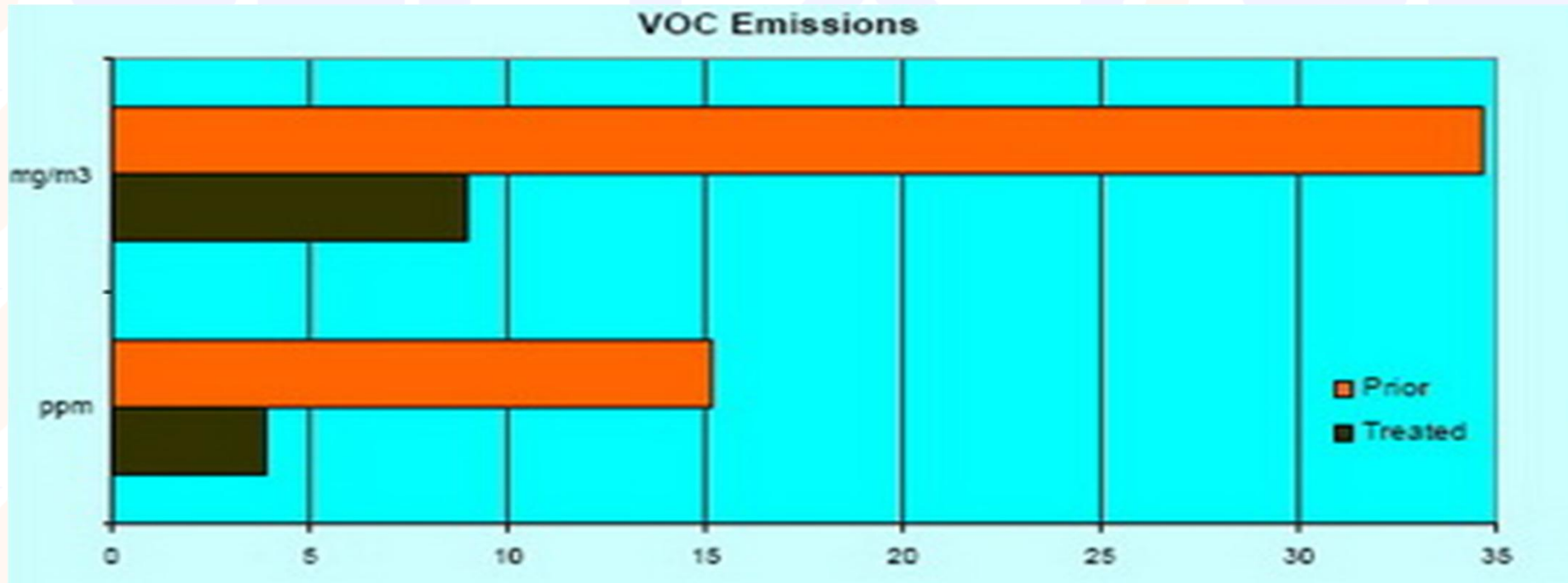
The usage of SEPT-X is 50 gm per hour.



Odor Control – Air Quality Emission

Results

Independent sampling by SGS was taken on the 3rd of April 2008, prior to application of SEPT-X. The following 10 minutes of application further sampling was taken.



VOC	ppm	mg/m ³
Prior	15.10	34.58
Treated	3.92 (74.0%)	8.98 (74.0%)

Carbon Credit

Kyoto Protocol 2004 Air quality emission

Lowering carbon footprint on a voluntary basis
= measure of the impact human activities have on the environment in terms of the amount of greenhouse gases produced, measured in units of carbon dioxide

Minimize several pollutants e.g. acid rain and nitrous oxide

Clean technologies, clean air quality emission

The Carbon Credit is this new currency and one Carbon Credit is equal to one Ton of CO₂ and is called a CO₂e (CO₂ equivalent).

Costs are between US \$10 - 40 per credit.

