The better-half of this issue delved deep into making millions from one. Here we shall advise you how to reverse the process making not one but zero from millions or billions and yet emerge as the richest winner.

All safe medical practices and procedures demand perfect sterility of self (operating hands), operative environment, operating instruments and the surface of the patient to be operated upon. A long, well conducted procedure/operation can be rendered useless/spoil by a single pathogen.

**BioShields** translates a solid impermeable wall between you or the patient and the vast, never ending army of microbes. These microbes arrive by air/fluids/surfaces.

**BioShields** promises you absolute solutions for either route to bring contamination rate to ‘ZERO’. Do not let your best sincere efforts turn into naught! Kill them right there - where you do not even expect them.

For this microbicidal activity, all you’ll ever get is praise, thanks, and yes of course, admiration laced with revenue.

The only humanly legalized lethal activity shall henceforth be whole-heartedly supported by **BioShields**. Strike them before they strike you. Our motto is amply clear -

**“PREVENTION BEFORE CURE”**
**Introduction**

**BioShields™**
High Technology Disinfectants

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**PREVENTION BEFORE CURE**

Air, Land, Water are essential elements around which diverse life forms on our planet thrive and survive.

Precious human life needs to be protected against the challenge mounted by microbes in day to day life as well as professional settings, in order to insulate mankind from a multitude of infectious agents.

Build up of resistance and development of resistant strains continues to challenge preventive healthcare and infection control professionals globally.

To overcome these challenges and to empower infection control professionals **BioShields** has researched, designed and developed potent, effective and safe disinfectant and antiseptic solutions for medical, industrial and general use.

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**HAND CARE**

The use of a hand antiseptic agent has proved to be the most effective way of reducing health-care associated transmission of contagious diseases than hand washing with plain soap and water. Designing an effective and user-friendly hand antiseptic agent is the actual challenge.

**BioShields** has created an array of hand antiseptic ranging from hand washes, hand rubs to specially designed industrial non-perfumed hand antiseptic agents.

**BioShields** has formulated a range of multi-purpose personal hygiene products, has created an array of hand antiseptic ranging from hand washes, hand rubs to specially designed industrial non-perfumed hand antiseptic agents.

| Sterimax™ | : Liquid Handrub Antiseptic with Triple Action |
| Triosept™ | : Liquid Handrub Antiseptic with Triple Action |
| Alconox™ | : Alcoholic Handrub Antiseptic with Moisturizer |
| Hitmax™ | : Liquid Microbicidal Handwash Soap |

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**SKIN PREPS**

Among surgical patients, surgical side infections (SSIs) remain a substantial cause of morbidity and mortality among hospitalized patients.

**BioShields** offers the perfect solution to surgical skin preparation. A specialized antiseptic solution for surgical skin preparation and post closure of skin that promises broad spectrum antmicrobial activity and persistent activity even in the presence of blood and other body fluids.

- **Surgiprep™**: Antiseptic solution for Preparation and Post-closure of Skin.
- **Surgiprep-CHX™**: Chlorhexidine based Antiseptic Solution for Preparation and Post-closure of Skin.

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**ENVIRONMENT AND SURFACE**

The environment is often overlooked as a passive player in hospital acquired infections owing to the emphasis laid on other more risky modes of transmission.

**BioShields** offers a complete solution for environment and surface disinfection both air and hard surfaces ranging from the routine agents for everyday decontamination regime to products that cater to specialized use of disinfection between cases, OT equipment disinfection etc.

- **Aerosept™**: Air and Surface Sprayable Disinfectant.
- **Fixsol™**: General Purpose Disinfectant Antiseptic Solution.
- **Microlyse™**: Disinfectant Cleaner for Floor and Hard Surfaces.
- **Silvice™**: Aerial Fumigant and Surface and Water Disinfectant Solution.
- **Silvice Plus™**: Concentrated Aerial fumigant and surface and water Disinfectant Solution.
- **Surfax™**: Disinfectant Cleaner for Floor and Hard Surfaces.
- **Surfax-T™**: Disinfectant Cleaner for Floor and Hard Surfaces.
- **Totasep™**: Disinfectant for Hospitals, Hotels and Food Industry.

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**INSTRUMENTS**

**BioShields** offers extensive user-friendly glutaraldehyde-based disinfectants with added corrosion inhibitors to ensure complete protection to instruments.

- **Actic™**: High Level Surgical Instrument Sterilizing & Disinfectant solution.
- **Asepedrill™**: Disinfectant Cleaner for Dental Drills and Burrs.
- **Clenzyme™**: Multi Enzyme Cleaner for Surgical, Medical and Dental Instruments.
- **Endomax™**: 2.4 % Glutaraldehyde Solution for High Level Disinfection and Sterilization.
- **Endomax Kit™**: 24 % Glutaraldehyde Solution for High Level Disinfection.
- **Endomax Plus™**: 3.4 % Glutaraldehyde Solution for High Level Disinfection and Sterilization.
- **Labsafe™**: Disinfectant Solution for Laboratoryware.
- **Opahyde™**: 0.55 % Ortho-Phthalaldehyde Solution for High Level Disinfection.

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**ANTISEPTIC**

The word ‘antiseptic’ has acquired the special meaning of an antimicrobial agent (microbicidal/microbistatic), suitable for application to living tissues and intended to reduce the viable count or inhibit the growth of microbial flora.

In lieu with the daunting task of being hard on organisms and gentle on skin, **BioShields** has formulated a range of multi-purpose personal hygiene products, which can be used for general antiseptics (routine day to day needs) and specialized antiseptics (preoperative showers).

- **Actall™**: Dual Action Antiseptic Disinfectant Solution
- **Alconox-W™**: 70 % Isopropyl Alcohol (2-Propanol) Saturated Swabs
- **Savinox Plus™**: Microbicidal Antiseptic Solution.
- **Zytall™**: Personal Care Antiseptic Solution.

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**DISINFECTION & STERILIZATION**

**BioShields** has researched, designed and developed potent, effective and safe disinfectant and antiseptic solutions for medical, industrial and general use.

- **Asepdrill™**: Disinfectant Cleaner for Dental Drills and Burrs.
- **Clenzyme™**: Multi Enzyme Cleaner for Surgical, Medical and Dental Instruments.
- **Endomax™**: 2.4 % Glutaraldehyde Solution for High Level Disinfection and Sterilization.
- **Endomax Kit™**: 24 % Glutaraldehyde Solution for High Level Disinfection.
- **Endomax Plus™**: 3.4 % Glutaraldehyde Solution for High Level Disinfection and Sterilization.
- **Labsafe™**: Disinfectant Solution for Laboratoryware.
- **Opahyde™**: 0.55 % Ortho-Phthalaldehyde Solution for High Level Disinfection.
BioShields® products have been evaluated for their claims and performances across a spectrum of leading users in medical & industrial settings. A crux of the actual user feedback is reproduced below, verbatim.

**Sterimax**
- Sterimax® shows a significant reduction in the bacterial load after application at the end of 3 minutes. This reduction is sustained for 30 minutes. No adverse effect is seen.
- Sterimax® in undiluted form kills / inactivates *E.coli*, *Salmonella typhi*, *Shigella flexneri*, *Staphylococcus aureus*, *Enterococcus faecalis*, *Streptococcus pyogenes*, *Candida albicans* and *Aspergillus niger* after contact time of sixty seconds.
- Sterimax® passes the test for “Health Care Personnel Hand Scrub” as it demonstrated more than 10² reduction in viability within 1 minute.
- A decrease in pre application bacterial load was observed after application of 3 ml of Sterimax® for 30 seconds.
- Sterimax® when checked in concentrated form after exposure on skin for 30 seconds showed no growth of any microorganisms in eight subjects and growth of normal skin flora in four subjects.

**Savinox Plus**
- Savinox Plus® kills / inactivates *E.coli*, *Salmonella typhi*, *Shigella flexneri*, *Staphylococcus aureus*, *Enterococcus faecalis*, *Streptococcus pyogenes*, *Candida albicans* in undiluted and 1:15 diluted form after contact time of one minute and *Aspergillus niger* after contact time of twenty minutes.

**Surgiprep**
- Surgiprep® in undiluted form kills / inactivates *E.coli*, *Salmonella typhi*, *Shigella flexneri*, *Staphylococcus aureus*, *Enterococcus faecalis*, *Streptococcus pyogenes*, *Candida albicans* and *Aspergillus niger* after contact time of one minute.

**Silvicide**
- Silvicide® in undiluted form kills / inactivates *Mycobacterium tuberculosis* (H37Rv) after contact time of 30 minutes.
- Silvicide® in undiluted form kills / inactivates *E.coli*, *Salmonella typhi*, *Shigella flexneri*, *Staphylococcus aureus*, *Streptococcus pyogenes*, *Enterococcus faecalis*, *Candida albicans*, *Aspergillus niger*, *Bacillus subtilis* vegetative cell and spores after contact time of one minute.
- Silvicide® in 1:5 dilution, kills / inactivates *E.coli*, *Salmonella typhi*, *Shigella flexneri*, *Staphylococcus aureus* and *Streptococcus pyogenes* after contact time of one minute and *Streptococcus faecalis*, *Candida albicans*, *Aspergillus niger*, *Bacillus subtilis* vegetative cell after contact time of 10 minutes.
- Silvicide® in 1:20 dilution, kills / inactivates *E.coli*, *Salmonella typhi*, *Shigella flexneri*, and *Staphylococcus aureus* after contact time of one minute. *Streptococcus faecalis* after contact time of forty minutes, *Streptococcus pyogenes* after contact time of twenty five minutes and *Candida albicans*, *Aspergillus niger*, *Bacillus subtilis* vegetative cell and spores after contact time of 45 minutes.

**Microlyse**
- Microlyse® in undiluted form kills / inactivates *E.coli*, *Salmonella typhi*, *Shigella flexneri*, *Staphylococcus aureus*, *Enterococcus faecalis*, *Streptococcus pyogenes*, *Candida albicans* and *Aspergillus niger* after contact time of one minute.

**Endomax**
- Endomax® on 1st, 7th and 14th day after activation in undiluted form kills / inactivates *E.coli*, *Salmonella typhi*, *Shigella flexneri*, *Staphylococcus aureus*, *Enterococcus faecalis*, *Streptococcus pyogenes*, *Candida albicans* and *Aspergillus niger* after contact time of one minute. *Bacillus subtilis* vegetative cell after contact time of 25 minutes and spores after contact time of 45 and 180 minutes.
- Endomax® in undiluted form kills / inactivates *Mycobacterium tuberculosis* (H37Rv) after contact time of 15 minutes.
- Endomax® treatment resulted in greater than 5 log reduction of microorganisms and fully satisfied the high-level disinfection capacity. Residual Endomax® solution after repeated disinfection over 14 days up to 30 days has high-level disinfection capacity.
- Endomax® passes the test for Basic Bactericidal Activity as it demonstrated more than 10² reduction in viability in 20 minutes.
- Endomax® solution has very good compatibility with Bronchoscope and Endoscope when used for 30 disinfection cycles.
- Cultures on Endomax® solution as well as from the surfaces of instruments sterilized by it when taken from 1st day through the 14th day have shown all samples to be sterile. The product behaves up to our expectations microbiologically.
- Endomax® when used as a high level disinfectant for endoscopes and other surgical instruments showed no corrosion, pitting, staining fogging in any of the instruments. Furthermore, it showed a good level of efficacy.
- Endomax® treatment for 10 minutes resulted in greater than 5 log reduction of *M. tuberculosis* and hence is efficient in killing mycobacteria in 10 minutes.
Where on earth do division and multiplication mean and imply the same? No, no, no. We aren’t talking about the mathematical digit “1”. We are talking about the smallest unit of life the “cell”. So, a dividing cell is also a multiplying cell. This process, however, requires essential nutrients that support life. You can make millions or even billions from one and that too overnight. It’s not money that we are talking about. No, we have not diversified into mutual funds or stock broking. It’s about commensals, saprophytes, parasites and pathogens. Grow, identify, sensitize and antagonize whichever microbe you desire, when you desire.

We take immense pleasure in introducing a new era with a new horizon that shall silver-line all your bacteriological exercises. After years of in-house R&D we have developed the ACCUMIX range of ultimate dehydrated media, media supplements and media bases. We (and many of you) dare say that they are better than the best available thus far. ACCUMIX translates into the most accurate mixture of all components of a medium to perfection.

Permit me to contradict the statement made above. A bacteriological job well done shall earn not only respect but also money for you. So go ahead and help yourself reach hither to unassailable heights. It is lonely, cold and dizzy out there, take my word, the view is exhilarating and breathtaking! We from TULIP are right behind you in achieving all that you have dreamt so far.
Introduction

Microxpress, a division of Tulip Diagnostics is a part of the Tulip Group of Companies renowned world over for its reliable immunodiagnostic products and platforms for clinical laboratory diagnostics.

Till date Microxpress has been manufacturing products for General Clinical Microbiology and Mycobacteriology for the isolation of culture, identification and susceptibility testing of *Mycobacterium tuberculosis*.

With the launch of **Accumix Dehydrated Culture Media, Bases and Supplements**, Microxpress takes another step to address the needs of professional microbiologists across the full spectrum of Clinical, Analytical, Industrial and Research Laboratories, globally.

**Accumix Dehydrated Culture Media, Bases and Supplements** are manufactured out of proven and well-characterized ingredients in state of the art facilities under stringent product and process control specifications.

The company currently offers a wide range of 275 products, all CE certified, and would add many more to expand and consolidate its portfolio of excellent products with consistent quality and performance.

**Accumix Dehydrated Culture media:**
A dehydrated culture medium is described as a substance or a group of substances that satisfies nutritional requirements like sources of oxygen, nitrogen, carbon, water, energy, inorganic salts, trace elements and other growth factors. Generally, dehydrated media should be sterile, able to support the growth of the respective organism and produce appropriate biochemical reactions.

Microxpress Accumix Dehydrated Culture media are easy to reconstitute and are time and labour saving. e.g., Azide Blood Agar Base, Legionella Agar Base, Violet Red Bile Agar.

**Accumix Media Supplements:**
Chemicals and antimicrobials are added to culture media to make them selective for certain rare organisms. The selective agents are chosen and added at specific concentrations to suppress the growth of unwanted microorganisms in a polymicrobial sample. Microxpress Accumix freeze dried, selective supplements, agents and growth supplements are used to prepare selective, differential or enriched culture media e.g., Bordetella Selective Supplement, Horse Serum, Egg Yolk Emulsion.

**Accumix Media Bases:**
Culture media bases or raw materials are the basic ingredients of any culture media. These are manufactured within Microxpress adhering to specified quality performance standards. The media bases or raw materials are provided for users who wish to create their own media or who wish to supplement the existing formulae. e.g., Fish Peptone, Heart Infusion Powder, Tryptose.

Read to use Microbiology products

- General Biochemical Identification Tests
- Ready made Analytical Reagents
- Water Testing Solutions
- Staining Solutions
- One Step Presumptive Identification Tests
- Ready Prepared Media
- Blood Culturing Systems
- Mycobacteriology
- Instaprep Range of Ready to Pour, Sterilized Pouched Media
- Urine Culture

The esteemed microbiology professionals now have a viable, high quality alternative.

“A journey of a thousand miles begins with the first step.”
**Mueller Hinton Agar**
The medium was very good and gave very clear results when compared to the standard medium.

**Plate Count Agar**
Quantitative enumeration was carried out using Accumix medium, which gave satisfactory results as compared with other reputed brand.

**TCBS Agar**
The Accumix medium appears to show better retrievability for Vibrio like organisms with respect to the other compared medium.

**Sabouraud Dextrose Agar, Endo Agar, Tryptone Glucose Extract Agar**
Test results are at par with the brand currently used.

**Violet Red Bile Agar**
Quantitative examination was carried out using the Accumix medium, which gave satisfactory results as compared to the other media used.

**Nutrient Agar, Sabouraud Chloramphenical Yeast Glucose Agar, Violet Red Bile Agar**
With reference to your dehydrated culture media samples under the brand name Accumix, I would like to congratulate for developing dehydrated culture media. The performance of Accumix media is excellent compared to others.

**Brilliant Green bile Broth 2%, Fluid Lactose Medium**
The medium powder is very well dehydrated. Good growth and gas production within 24 hours were observed.

**EMB Agar, Levine**
The medium allowed excellent, luxuriant growth of coliforms with characteristic metallic sheen within 24 hours.

**Nutrient Agar**
The growth of coliforms on the plates was luxuriant.

**MacConkey Agar**
Total coliform counts are at par with the standard brand used.

**Nutrient Agar with 1% Peptone, Potato Dextrose Agar, Plate Count Agar**
Quantitative examination was carried out using the above Accumix medium, which gave satisfactory results.

* Actual user comments across spectrum of laboratories; Data on file: Microxpress - A Division of Tulip Diagnostics (P) Ltd.