

SM72

DTF200



Healthier Way to Life

RELYON

Prepared by :-

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Website: www.clo2india.com

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A BROAD-SPECTRUM DISINFECTANT

SM72

DTF200

FOR SEA FOOD & MEAT INDUSTRIES

1. WHAT IS RELYON SM72 DTF200 :-

RELYON SM72 DTF200 IS A TWO-COMPONENT LIQUID KIT THAT DELIVERS A 0.76% CHLORINE DIOXIDE SOLUTION. RELYON SM72 DTF200 DOES **NOT** GENERATE BY-PRODUCTS KNOWN FROM CHLORINE DIOXIDE (e.g. CHLORITE, CHLORATE, CHLORIDE OR FREE CHLORINE). **RELYON SM72 DTF200 CAN BE CONSIDERED FAR MORE ADVANCED THAN CHLORINE DIOXIDE GENERATED IN CLASSICAL WAYS.** FURTHER RELYON SM72 DTF200 IS NOT EXPLOSIVE AND HAS A CHEMICAL HALF TIME OF 30-60 DAYS (DEPENDING ON STORAGE CONDITIONS). LIKE OZONE, CHLORINE DIOXIDE IS SOLUBLE AS A TRUE GAS. THE ClO_2 MOLECULE REMAINS A TRUE GAS IN SOLUTION-MAKING IT MORE ENERGETIC AND ABLE TO REACH ALL POINTS IN A SYSTEM. BECAUSE IT IS A TRUE GAS AND SOLUBLE IN VIRTUALLY ANYTHING, IT CAN PENETRATE THE BACTERIAL SLIM LAYER (BIOFILM). FINALLY, CHLORINE DIOXIDE BREAKS DOWN TO SODIUM CHLORIDE. THIS ALONG WITH THE FAILURE TO FORM TOXIC AND CARCINOGENIC CHLORINATION BY-PRODUCTS AND PRODUCE A BUILD-UP OF TOXIC ORGANIC OR INORGANIC BY-PRODUCT LIKE BROMATES MAKES CHLORINE DIOXIDE THE **MOST ECO-FRIENDLY BIOCIDES** THAT CAN BE USED.

2. APPLICATION AREA –SEA FOOD & MEAT PROCESSING:

THE SEA FOOD , **MEAT PROCESSING** AND RENDERING INDUSTRY INCLUDES THE SLAUGHTER OF ANIMALS, PROCESSING OF THE CARCASSES INTO CURED, CANNED AND OTHER MEAT PRODUCTS AND RENDERING OF INADEQUATE AND DISCARDED REMAINS INTO USEFUL BY-PRODUCTS SUCH AS LARDS AND OILS. A WIDE RANGE OF PROCESSES ARE INVOLVED; BEGINNING FROM STUNNING AND

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SLAUGHTERING AND THEN BLEEDING,SCALDING, SKINNING,EVICERATION,CHILLING/HANGING, CUTTING/DEBONING,PACKAGING TO FINALLY FREEZING AND DELIVERY.

IT HAS BEEN OBSERVED THAT MOST OF THE INFECTION AND CONTAMINATION IS PICKED UP AT THE PROCESSING PLANT.THIS IS A CAUSE OF SERIOUS CONCERN TO FOOD INDUSTRY,CONSUMERS AND REGULATORY BODIES,BESIDES,THAT IT CAUSES FINANCIAL LOSSES AND FOOD SCARE.THE MAIN PROBLEM IS THE CONTROL OF CROSS-CONTAMINATION. CONTAMINATION OF CARCASSES CAN OCCUR VIA CONTACT WITH SOILED SURFACES, EQUIPMENT OR THE HANDS OF OPERATIVES.MICRO ORGANISM CAN ALSO BE SPREAD IN THE AIRBORNE DUST PARTICLES AND DROPLETS AND THROUGH ANY RUPTURE OF THE INTESTINES DURING EVISCERATION. E.COLI CONTAMINATION OCCURS FIRST FROM IMPROPER

EVISCERATION,WHICH LEAVES FAECAL MATERIAL ON THE CARCASS.IF THE FAECAL MATERIAL OR THE CONTAMINATED CARCASS IS NOT REMOVED PRIOR TO CHILLER,CROSS-CONTAMINATION CAN OCCUR.

WHILE GREAT CARE AND ATTENTION IS OFTEN TAKEN TO MINIMIZE THE RISK OF INFECTION FROM PROCESSING STAFF AND OTHER FOOD HANDLERS,RELATIVELY INEFFECTUAL BIOCIDES AND DISINFECTANTS ARE USED TO TREAT PROCESS WATER AND EQUIPMENT.

HOWEVER, ICE IS AN IMPORTANT PART IN THE PROCESSING FOR RETAINING FRESHNESS AND SHELF LIFE, [RELYON SM72 DTF200](#) IS BENEFICIAL IN MANY WAYS i.e. IF WE PREPARE ICE WITH CIO2 IT WILL HELP IN DISINFECTION AS WELL AS RETAINING SHELF LIFE(TWO IN ONE SOLUTION).

BEWARE,THAT EVEN A SINGLE CONTAMINATED BATCH OF FOOD,ONE POOR OR ERRATIC OUTPUT CAN DESTROY YOUR COMPANY`S REPUTATION.

WATER IS ONE OF THE SINGLE BIGGEST RAW MATERIALS USED IN PROCESSING SYSTEM,AND ITS QUALITY IS OF GREAT IMPORTANCE TO PREVENT CONTAMINATION OF FOOD PRODUCT.THE USE OF CONTAMINATED WATER IN THE FOOD PROCESSING PLANT CAN SPREAD INFECTION ACROSS THE WHOLE BATCH.WATER WHEATHER OBTAINED FROM MUNICIPAL SOURCE OR ANY OTHER WILL ALWAYS CARRY BACTERIA-SOME HARMLESS BUT OTHERS MAY INCLUDE FAECAL COLIFORMS,DREADED E.COLI etc. ALSO THE MEAT INDUSTRY HAS THE POTENTIAL FOR GENERATING LARGE QUANTITIES OF SOLID WASTES AND WASTE WATER.

MANUFACTURERS OFFER A LARGE NUMBER OF DISINFECTANTS,EACH CLAIMED TO BE THE BEST ON THE MARKET. COMMONLY AVAILABLE CONTAIN CHEMICALS OF THE FOLLOWING GROUPS:

1. CHLORINE AND CHLORINE RELEASING COMPOUNDS.

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2. QUARTERNARY AMMONIUM COMPOUNDS.
3. AMPHOTERIC (AMPHOLYTIC) COMPOUNDS.
4. PERACETIC ACID.

THE **DISADVANTAGES** OF THE ABOVE CHEMICALS ARE MANY AND THEIR DISINFECTANT PROPERTIES ARE LIMITED BY MANY FACTORS;SOME OF WHICH ARE LISTED BELOW:

1. THE CONCENTRATION OF AVAILABLE CHLORINE SHOULD BE AS HIGH AS 200-300mg/ltr.
 2. PERACITIC ACID AND QUATS ARE ONLY EFFECTIVE ONLY IN HIGH DOSES. PERACITIC ACID PRODUCES ACETIC ACID,WHICH IS VERY USEFUL NOURISHMENT FOR MICRO ORGANISMS-THEREFORE BACTERIA GROW/ENLARGE MORE AFTER USING PERACITIC ACID.
 3. TO REDUCE THE BREAKDOWN DURING STORAGE,THE HYPOCHLORITE SOLUTION SHOULD BE MAINTAINED AT PH 9-11 i.e.HAS PH LIMITATION.
 4. THE DISINFECTANT CAPABILITIES ARE DIMINISHED IN THE PRESENCE OF FATS,OILS,PROTEINS,BODY FLUID etc.
 5. NOT EFFECTIVE AGAINST WIDE RANGE OF BACTERIA,SPORES,FUNGI AND VIRUSES.
 6. THE HYPOCHLORITE IS MORE EFFICIENT IF THE CONCENTRATION AND TEMPERATURE ARE RAISED AND/OR THE PH IS LOWERED.
 7. THESE ARE TEMPERATURE AND CONTACT TIME DEPENDENT (LONG EXPOSURE IS REQUIRED).
 8. THESE ARE VERY CORRESIVE AND STAINING TO COMMON METALS.
 9. ORGANIC MATERIAL CONSUMES CHLORINE AND REDUCES THE DISINFECTING CAPACITY.
10. MANY DEVELOP TOXIC GASES AND IRRITATE THE SKIN OF PERSONNEL.

CHLORINE IS OFTEN USED AS A TREATMENT FOR WASH WATER, ALTHOUGH THERE ARE FREQUENT PROBLEMS WITH TASTE TINTING AND UNPLEASANT WORKING ENVIRONMENTS AT HIGH LEVELS

RELYON SM72 DTF200,A VERY POWERFUL BIOCIDES,HAS A NUMBER OF **ADVANTAGES** OVER OTHER PRODUCTS COMMONLY USED IN THE INDUSTRY. **RELYON SM72 DTF200** IS BEST DOSED AT THE VARIOUS UNIT PROCESSES TO ACT AS A BREAK IN CONTAMINATION THEREBY REDUCING/ELIMINATING CROSS CONTAMINATION AS WELL AS REMOVING SUPERFICIAL MICRO ORGANISMS BEFORE THEY HAVE AN OPPORTUNITY TO BECOME ATTACHED AND PENETRATE THE CARCASS.

RELYON SM72 DTF200 IS APPLICABLE IN SEA FOOD & MEAT PROCESSING IN VARIOUS AREAS. IT IS ADDED IN WATER/ICE THAT IS USED IN PROCESSING ANY MEAT PRODUCTS.IT MAINTAINS THE MICROBIAL QUALITY OF WATER EVEN IN PRESENCE OF HIGH ORGANIC LOADING,THEREBY IMPACTING UPON QUALITY MAINTENANCE AND SUBSTANTIAL IMPROVEMENT OF SHELF LIFE OF THE PRODUCTS. MOREOVER **RELYON** HELPS IN TREATING WASTEWATER DISCHARGES AND REMOVING ODOUR PROBLEM OFTEN ASSOCIATED WITH FOOD PROCESSING PLANTS.

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RELYON SM72 DTF200 IS PROVEN AGAINST BOTULISM ORGANISMS AND OTHER FOOD CONTAMINANTS SUCH AS SALMONELLA, STAPHYLOCOCCUS ,STREPTOCOCCUS etc. EVEN MOST RESISTANT STRAINS OF FUNGI ARE COMPLETELY DESTROYED IN 60 SECONDS. TRICOPHYTON MENTAGROPHYTES ARE KILLED IN 5 MINUTES. THE MOST DIFFICULT ORGANISMS OF ALL-THE SPORE FORMERS ARE DESTROYED IN 5 MINUTES-MANY MANY TIMES FASTER THAN MOST CHEMICALS;YET **RELYON SM72 DTF200** IS SAFE ENOUGH AND REQUIRES NO RESTRICTIONS ON USE IN DIRECT CONTACT WITH FOOD.

3.RELYON GERMICIDAL SPECTRUM:

BACTERIA:

E.COLI
PSEUDOMONAS AERUGINOSA
PSEUDOMONAS SPECIE
ENTEROBARCTER CLOACEAE
ENTEROBARCTER HAFNIA
PROTEUS VULGARIS
KLEBSIELLA PNEUMONIAE
SALMONELLA TYPHI
SALMONELLA ENTERIDITIS
SALMONELLA GALLINARUM
SALMONELLA TYPHIMURIUM
SALMONELLA CHOLERAESUIS
SALMONELLA TYPHOSA
CORYNEBACTERIUM NUCLEATUM
SARCINAE LUTAE
STREPTOCOCCUS PYROGENES

COXIELLA BURNETTI
CAMPYLOBACTER JEJUNI
FLAVOBACTERIUM SPECIES
YERSINIA ENTEROLITICA
CLOSTRIDIUM SPOROGENUS
CLOSTRIDIUM DIFICILE
CLOSTRIDIUM PERFINGENS
FUSOBACTERIUM NUCLEATUM
BACILLUS SUBTILIS
BACILLUS CIRCULANS
BACILLUS MEGATARIUM
BACILLUS CEREUS
BIFEDIBACTER LIBERIUM
STAPHYLOCOCCUS AUREUS
STAPHYLOCOCCUS EPIDERMIA
STREPTOCOCCUS FAECALIS

STEP 1,2,3

MYCOBACTERIUM SMEGMATIS

MYCOBACTERIUM BOVIS

MYCOBACTERIUM KANSAII

FUNGI:

CANDIDA ALBICANS
SCOPULARIOSIS SPECIES
TRICHOPHYTON MENTAGROPHYTES

TRICOPHYTON RUBRUM
ASPERGILLUS NIGER
ASPERGILLUS FLAVUS

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MUCOR SPECIES
SACHROMYCES CEREVISIAE

FUSARIUM SPECIES
FONSECAEA PEDROSOI

VIRUS:

HERPES VIRUS 1
HERPES VIRUS 1
ADENOVIRUS ECHOVIRUS
COXSAKIEVIRUS
INFLUENZA
FELINE PAROVIRUS
MOUSE FLU
MINUTE VIRUS OF MICE (MVM)
NEW CATTLE DISEASE VIRUS
IRIDOVIRUS

POLIOVIRUS
ENCEPHALOMYOCERDITIS (EMS)
VACCINA VIRUS
VESICULAR STOMATITIS VIRUS (VSV)
PARA INFLUENZA
BLUETONGUE VIRUS
MOUSE HEPATITIS VIRUS (MHV)
MOUSE ENCEPHALOMYELITIS VIRUS
MOUSE POLIO VIRUS (MEV)
PERTIVIRIES – TOGAVIRIDAE

OTHER:

VIBRIO CHOLERAEE
MYCOPLASM

CULEX QUINQUIFASIATUS

4. COST COMPARISON:

AN ABSOLUTE COMPARISON PER VOLUME OF OTHER DISINFECTANTS DOES NOT PROVIDE THE REAL COST COMPARISON WITH [RELYON SM72 DTF200](#) OTHER COST FACTORS RANGE FROM:

- (CHLORINE) REACTOR COST OF OWNERSHIP, INCLUDING MAINTENANCE, CERTIFICATION AND RE-CERTIFICATION.
- SECURITY MEASURES & RISK AND LIABILITY INSURANCE POLICY.
- TRAINING, CERTIFICATION AND RE-CERTIFICATION OF QUALIFIED PERSONNEL.
- ENVIRONMENTAL, HEALTH & SAFETY FACTORS.
- HAZARD TRANSPORT COST.
- USE OF ADDITIONAL CHEMICALS (e.g. PH LEVEL STABILIZERS).
- THE COST OF **NOT** DELIVERING THE REQUIRED BIOCIDAL RESULTS.

5. APPLICATION AREAS AND DOSAGE:

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- CARCASS SPRAYER.
- CARCASS DIP OR SPRAY AFTER DEBONING.
- ODOR CONTROL.
- CLEANING OF FLOOR, WALL AND OTHER HARD SURFACES,SANITIZING PLANT AND MACHINERY.
- SPOOLING OF SAUSAGE CASINGS.
- ICE PLANT.
- WASTE DISPOSAL AND DRAINS.
- ANY PROCESS OR WASH WATER.

CHLORINE DIOXIDE CAN BE USED AT UPTO 5PPM WITHOUT CAUSING EXCESS ODOUR. OVER 5 PPM AND UP TO 7 PPM EXTRA VENTILATION MAY BE REQUIRED.

RELYON SM72 DTF200 IS AVAILABLE AS 7600 PPM CONCENTRATE. DOSAGE IS SUBJECT TO VARIOUS FACTORS SUCH AS MEAT TYPE,CONTAMINATION LEVEL,QUALITY OF PROCESS WATER AND OTHER ENVIRONMENTAL CONDITIONS. IT IS ALWAYS ADVISABLE TO CONSULT VETERINARIAN OR CONSULTANT OR CONSULTANT PRIOR TO COMMENCING TREATMENT PROGRAM.

6. SUMMARY:

RELYON SM72 DTF200 –ClO₂,WHICH HAS BEEN DEVELOPED BY EXPERIENCED SCIENTISTS,IS A VERY POTENT BIOCIDES WHILE AT THE SAME TIME BEING STABLE,RELIABLE & ENVIRONMENT FRIENDLY.FREQUENTLY, SYSTEMS THAT REQUIRE MULTIPLE BIOCIDES FIND EQUAL OR BETTER MICROBIOLOGICAL CONTROL WITH JUST RELYON SM72 DTF200

RELYON SM72 DTF200 IS A SPECIFIC OXIDIZER AND HAS LITTLE TO NO REACTIVITY WITH MANY PRODUCTS THAT MAY BE FOUND IN WATER.IT DOES, HOWEVER,REACT WITH SOME PRODUCTS

READILY. THESE PRODUCTS INCLUDE MANY AMINO ACIDS (SULFUR CONTAINING AMINO ACIDS),CYANIDE,HYDROGEN SULFIDE,FORMALDEHYDE,IRON,MANGANESE AND PHENOLIC

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COMPOUNDS. THIS QUICK REACTIVITY WITH AMINO ACID, THE BUILDING BLOCKS OF LIFE, IS ONE OF THE REASONS THAT **RELYON SM72 DTF200** IS SUCH A STRONG BIOCIDES.

MANY APPLICATIONS FOR CHLORINE DIOXIDE CAN BE FOUND. THERE IS A BIG LIST OF CONSIDERATIONS AND APPLICATIONS THAT MAKE CHLORINE DIOXIDE INTERESTING TO USE ABOVE THE KNOWN TRADITIONAL DISINFECTANTS. THE LIST IS LONG AND INCLUDES TREATMENT FOR POTABLE WATER, FOOD, MEMBRANES, LEGIONELLA, ALGAE, BIOFILM, AND PROCESS APPLICATIONS, CLEANING IN PLACE, AIR TREATMENT etc. ALSO ON THE LIST ARE ISSUES INCLUDING SYNERGY WITH WATER TREATMENT CHEMICALS, USE COST, SYSTEM PERFORMANCE, ENVIRONMENTAL IMPACT, SELECTIVE OXIDIZER, AND WIDE PH RANGE.

ONE FACT MANY PEOPLE SEEM TO AGREE UPON IS THAT THERE ARE A LOT OF GOOD REASONS TO USE **RELYON SM72 DTF200**

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