Strengthening the Vaccine Cold Chain with IoT-based Smart Vaccine Storage Management

IoT-기반 스마트 백신 보관 관리를 통한 백신 콜드 체인 강화

[GT SCIEN / David Friedman / Lead, International Business]



1. Company Introduction



Lab EHS Solutions Provider

회사소개 / LAB EHS 솔루션

LABJEHS 4.0

LABORATORY

With years of laboratory experience, we have the experience and know-how to solve our client's problems, no matter the application

ENVIRONMENT, HEALTH & SAFETY

Researcher health and safety, and environmental protection are the core of our business and drive product development

We improve safety by adopting advanced technologies

We are evolving as a company to become An integrated laboratory safety solution provider by utilizing and adapting Industry 4.0 technologies such as IoT and AI

1. Company Introduction



회사소개 / History

✓ 12 years of experience manufacturing excellent quality storage solutions
 ✓ First company world-wide to create laboratory-grade IoT refrigerator



ISO 9001, 14001 Certification Venture Corp. Certification Completely Sealed Reagent Launched 2009



Excellent Global Corp. Designation Reagent Management System Toxic Gas Purifer Updated 2012 to 2013





IoT RSPMS Developed IoT Sealed Reagent Storage Launched Smart Toxic Gas Purifier Launched Smart Ductless Fume Hood Launched 2015



Excellent Green Enterprise Designation IoT LSPMS Developed Aluminum Profile Lab Table Launched Aluminum Profile Fume Hood Launched Pin Up Design Award Good Design Award 2017



Shanghai China Office Est.

ILTS Excellent Procurement Product

UN Citypreneurs Finalist

2019



2008

2008 Compo

Company/Manufacturing Plant Established TOGA® Filter Launched Toxic Gas Purifier Launched





2011

Green Tech. Certification R&D CENTER Established Refrigerated Reagent Storage Cabinet Launched





2014

INNO-BIZ Certification Ventilated Lab Table Launched Exhaust Fume Hood Launched





2016

Green Enterprise Certification IoT RSPMS GS Certification IoT Refrigerated Reagent Storage Launched





2018

Tsukuba Japan Office Established K, Q Mark Cert. for Intelligent Lab Table System (ILTS) Pin Up Design Award IoT LSPMS GS Certification







Major Problems in Vaccine Distribution and Storage: Management & Monitoring

문제 / 백신 유통에 있어 주요 문제점: 관리 및 모니터링

Temperature Management & Monitoring

Every storage unit should have a Temperature Monitoring Device (TMD) and over 50% of all vaccines are wasted globally due to failure to maintain proper temperature

Vaccine Management & Monitoring

Difficulties in vaccine inventory accounting, vaccine ordering, understanding expiration dates & beyond use dates, proper vaccine disposal

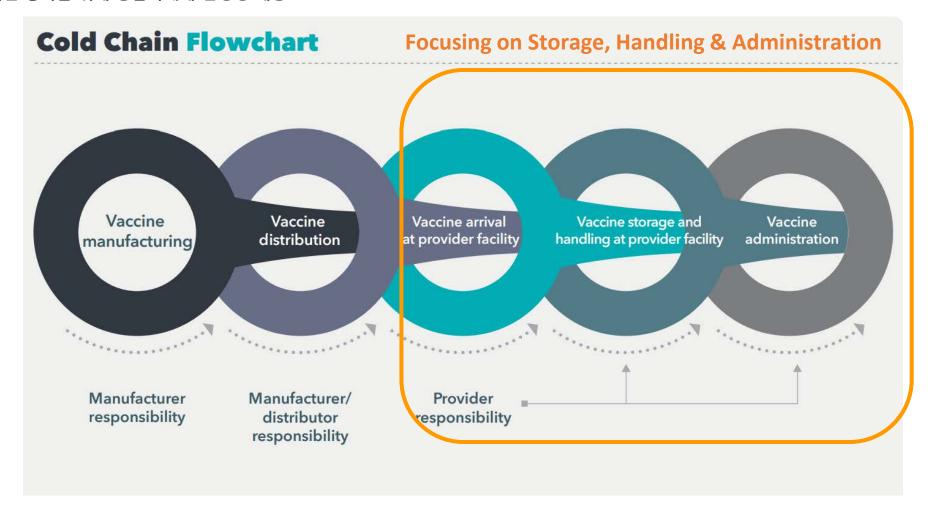






Strengthening the end of the Cold Chain: Providing Stability for Providers

솔루션 / 콜드 체인 강화를 위해 공급자에게 안정성 제공



If the cold chain is not maintained, the result is a useless vaccine supply



Introducing the Ultimate Vaccine Refrigerator

솔루션 / 제품 소개



- Patented refrigeration technology provides stable,
 uniform temperatures
- Equipped with virus-killing filter technology
- Built-in IoT vaccine management system manages
 vaccine usage, storage, and refrigerator
 temperatures

The Ultimate Vaccine Refrigerator



Patented Refrigeration Technology: Guaranteed Uniform & Stable Temperatures

기술소개 / 특허 받은 냉매 기술





Patented Refrigeration Technology

- Extremely low (1.0°C) temperature variance
- Air circulation optimized to maintain temperature distribution while filtering air of dust & toxins

Guarantee Patients Receive Effective Vaccines

GTSCIEN Green Technology Science & Environment

Cutting Edge IoT Technology

기술소개 / 최첨단 IoT 기술



User & Vaccine Management: RFID-based Real-time Monitoring



- 4W (who, what, where, when) fundamental, systematic management
- Purchase, storage, in/out, disposal comprehensive management

Systematic Safe & Autonomous Vaccine Management



Real-time Temperature Monitoring

- Check temperatures in real-time
- Instant notification if temperatures exceed set levels

Reduce Vaccine Waste & Reduce Vaccination Costs



Optimized User Experience via 7in. LCD Display

- Easy-to-use intuitive UI
- Temperature, expiration date, disposal, in/out, & use history management

Easy Access to Vaccine Management Information

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Comprehensive Vaccine Storage Management

기술소개 / 종합적 백신 보관 관리







- ✓ Intuitive GUI for easy on-site management
- ✓ Web/Mobile application suite allows managers to check refrigerator temperature, vaccine expiration dates instantly
- ✓ Information sharing ecosystem: vaccine, refrigerator, web, smartphone



Clean Air Technology

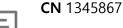
기술소개 / 토가 클린 시스템

Patented Filter • Technology



Patent

KR 제0941666호



US US8845971 B2

IN 276380

TOGA® Clean System: How it Works



Two Stage Virus Purification

- HEPA filter deactivates viruses by destroying the envelope of the virus
- TOGA filter attacks respiratory and electron transmission processes to kill the virus

Clean Air Guaranteed.

5. Sales / Marketing



Established Domestic / International Network

세일 및 마케팅 / 국제 네트워크











Thank You

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