



# MicroDigital Co., Ltd

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# Company

# Company Overview

Research, development and manufacturing of biotechnology and environmental technology equipment centered around diagnosis and analysis

Company Name	MicroDigital Co., Ltd.
CEO	Kyung Nam Kim, PhD
<b>Established</b>	August 2, 2002
Business Sector	Research, development, production and sales of biomedical and environmental measurements and analysis
Office	CS-7th floor, 15, Pangyo-ro 228beon-gil, Bundang-gu, Seongnam-si, Gyeonggi-do, 13487, Rep. of KOREA
Factory	Doosan Venturedime #634, 126-1 Pyeongchon-dong, Dongan-gu, Anyang-si, Gyunggi-do
Capital	100 million KRW
Shareholders	Kyung Nam Kim(CEO) and related parties(60.5%), Seoulin Bioscience Inc.(14%), Mirai Creative Company(1.8%), private investors(23.7%)
<b>Employees</b>	30
<b>Certifications</b>	<Venture Company Certification>, <R&D Center>, <Inno-Biz Certification>, <Medical Device Quality Management Certification>, <ISO9001> <ISO 13485>
Product Certifications	All medical and bio products on market are CE certified
<b>Patents</b>	19 patents registered, 10 patents pending
Customers	Domestic and overseas hospitals, medical and environmental research institutes and others

## Foundation phase (research and development)

2002	<ul style="list-style-type: none"> <li>• Founding of MicroDigital Co., Ltd.</li> </ul>
2003~2005	<ul style="list-style-type: none"> <li>• Development/market release of iSBS, a total solution for biosample banking system</li> <li>• Kyung Nam Kim, PhD appointed CEO</li> <li>• Venture company certified</li> </ul>
2006~2008	<ul style="list-style-type: none"> <li>• Innovative small business(Inno-Biz) certified</li> <li>• Development and market release of bioluminescence detection equipment</li> <li>• Founding of MicroDigital USA(US subsidiary, LA)</li> <li>• Development and market release of chemiluminescence detection equipment</li> <li>• Capital increase with investment from Seoul Bioscience Co., Ltd</li> <li>• Development and technology transfer of disposable cell culture system</li> </ul>

## Growth phase (R&D, production and sales)

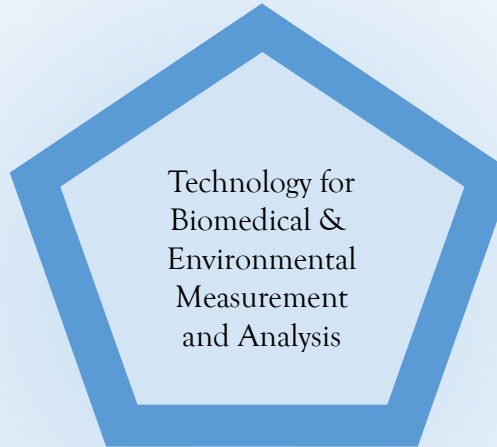
2011~2012	<ul style="list-style-type: none"> <li>• Relocation to Korea Biopark, Pangyo</li> <li>• Participation in Clinical Lab Expo 2012 (LA, USA)</li> <li>• Participation in MEDICA 2012 (Dusseldorf, Germany)</li> </ul>
2013~2014	<ul style="list-style-type: none"> <li>• Medical device manufacturing plant established (Anyang, Pyeongchon)</li> <li>• Development and market release of POCT system</li> <li>• Development and release of biomass pulverization, desiccation, disinfection system</li> <li>• Capital increased to 710million KRW (710 thousand USD equivalent)</li> <li>• Development and release of combined ELISA/CLIA system</li> <li>• Development and release of simple chemiluminescence measurement device</li> <li>• Participation in Clinical Lab Expo 2103/2014 (USA)</li> <li>• Development and release of light absorbance measurement device</li> </ul>
2015	<ul style="list-style-type: none"> <li>• Participation in Arab Health 2015 (Dubai, UAE)</li> <li>• Participation in Clinical Lab Expo 2015 (Atlanta, USA)</li> </ul>
2016	<ul style="list-style-type: none"> <li>• Participation in Arab Health 2016 (Dubai, UAE)</li> <li>• Participation in Clinical Lab Expo 2016 (Atlanta, USA)</li> <li>• Participation in CMEF 2016 (Shanghai, China)</li> </ul>

## Optical Detection

- Luminescence - Quantitative optical detection for measuring light occurring from a reaction between reagents
- Technology for luminescence, fluorescence, absorbance detection
- The only company in Korea to offer luminescence technology solution

## Image Detection

- Technology for quantification after detection of reaction between reagents using image sensor.
- Image pattern measurement analysis technology
- fluorescence analysis technology
- Ex) counting number of light emissions in an image



## Automation (Control)

- Position control & environment control technology
- Temperature control, motion control, and liquid control
- Biomedical device automation technology

## Dynamic Control

- Speed / load / dispense control technology required for safe operation of high speed rotational instrument
- Heavy machinery engineering & designing, customization technology / inverter control technology






## Chip (Microfluidic)

- Increased sensitivity in rapid diagnosis due to increased surface area of the chip.
- Microfluidic handling technology required in a cartridge design for rapid diagnosis
- Micro-channel flow design, development, and application



# Products

# Major Products on sales

Product	Type	Description	Applications	Note
Diamond	Fully automated immunoanalyzer	<ul style="list-style-type: none"> <li>Automated instrument that diagnoses cancer, hepatitis and other diseases by testing blood or other bodily fluid</li> </ul>	Medical institutes, research institutes	
Trova	Point-of care testing (POCT)system	<ul style="list-style-type: none"> <li>System that rapidly diagnoses patients by testing bodily fluid, specialized for patients requiring rapid diagnosis (ex. myocardial infarction)</li> <li>Quick results within 20 minutes</li> </ul>	Emergency rooms, etc.	
Nabi	UV/VIS Spectrophotometer	<ul style="list-style-type: none"> <li>Instrument that analyzes sample's components through measuring how the sample absorbs light (absorbance)</li> </ul>	Medical institutes, research institutes	
Lumi	Luminometer	<ul style="list-style-type: none"> <li>Instrument that quantifies light emitted from samples(lumination) to analyze various biological and chemical reactions</li> <li>Miniaturized for maximum ease of installation and use</li> </ul>	Medical institutes, research institutes	
iSBS	Integrated sample banking solution	<ul style="list-style-type: none"> <li>The only sample management solution that seals liquid sample for semi-permanent storage, identification and management</li> </ul>	Research labs and institutes that require bio banking system	





# Diamond, Nabi, TROVA

# Fully Automated Immunoanalyzer [Diamond]

## Diamond : Fully automated immunoanalyzer

### Summary

- ELISA & CLIA
- Dual microplate
- Open platform
- Class 1 medical grade immune absorbance measurement device (15-349)

### Advantages

- High diagnostic reliability due to use of disposable parts in handling samples which decreases likelihood of contamination
- Twice the throughput in a given time allows rapid diagnosis of large number of samples
- 8-channel well washing module enables rapid processing of liquid
- Comprehensive admin mode that can control various test parameters

### Uses

- Secondary care, tertiary care, medical laboratories and diagnostic facilities



# UV/VIS Nano Spectrophotometer (Nabi) R&D

## Nabi: UV/VIS Nano Spectrophotometer

### Summary

- Measures the quantity of light that are absorbed into the sample during bio · chemical reaction to find the concentration of the light

### Advantages

- Same quality performance compare to Thermo Fisher
- Quantitative measurement of Nucleic Acid, Protein, and Cell concentration with small sample size with fast time.

### Uses

- Laboratory medicine, gene revelation organism laboratory , pollution level measurement organization, and many others that requires very fast measure the clinical specimen.



## TROVA : POCT System

### Summary

- System that rapidly diagnoses patients by testing bodily fluid, specialized for patients requiring rapid diagnosis

### Advantages

- Quick results within 20 minutes
- C.V=3%
- higher accuracy compared to other commercially available product

### Uses

- Emergency room, etc,





# Thank you

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