

**INDUSTRIAL TECHNOLOGY DEVELOPMENT INSTITUTE**

Implemented Programs and Projects

As of Q4 2021

Division/ No.	Project Code / Project Title	Duration			Status
		Started	Completion Date		
			Original	Revised	
<b>GAA-FUNDED PROJECTS</b>					
<b>CHEMICALS AND ENERGY DIVISION</b>					
1	<b>RDR-CED-2019-01</b> Natural Hydrocolloid as Alternative Emulsifier and Stabilizing Agent from Okra ( <i>Hibiscus esculentus</i> ) Pods	01-Jan-20	31-Dec-20	31-Mar-21	Completed
2	<b>RDR-CED-2020-02</b> Processing of Anti-freezing Agent for Biodiesel	17-Feb-20	31-Dec-20	31-Mar-21	Completed
3	<b>RDR-CED-2020-03</b> Development of Uninterruptible Power Back-Up System Using Motor Control for Lighting Applications as Sample Electrical Load	17-Feb-20	01-Jan-21	31-Mar-21	Completed
4	<b>RDR-CED-2020-04</b> Catalytic Hydrogenation and Transesterification of Highly Unsaturated Fatty Acids from Rubber Seed Oil	17-Feb-20	31-Dec-20	31-Mar-21	Completed
5	<b>RDR-CED-2020-05</b> Bench-scale Production of Curcumin from Philippine Turmeric using Different Extraction Methods	01-Jan-20	31-Dec-20	31-Mar-21	Completed
6	<b>RDR-CED-2021-01</b> Isolation, characterization and utilization of waste lignin in biobased adhesives	01-Jan-21	31-Dec-21		Completed
7	<b>RDR-CED-2021-02</b> Scale Up of Power Back-Up System for Large Equipment	01-Jan-21	31-Dec-21		Completed
8	<b>RDR-CED-2021-03</b> Development of Microcontroller & Minicomputer Applications for Selected Equipment units of the MMIC and a Bench-Scale Hydrothermal Carbonization Equipment of the CED Laboratory	01-Jan-21	31-Dec-21	28-Feb-22	Ongoing
9	<b>RDR-CED-2021-04</b> Reformulation and Innovations in Some Personal Healthcare Products Using MMIC Equipment	01-Aug-21	31-Aug-22		Ongoing
<b>ENVIRONMENT AND BIOTECHNOLOGY DIVISION</b>					
10	<b>RDR-EBD-2020-01</b> Development of a Fermentation Product (Kimchi-Filipino adaptation) from locally-grown vegetables using indigenous LAB isolates as starter culture	1-Jan-2020	31-Dec-2020	31-Mar-21	Completed
11	<b>RDR-EBD-2020-03</b> Bioactive Substances from Actinomycetes Isolated from Different Sources Phase 2. Production, purification and characterization of the bioactive substances	1-Jan-2021	31-Dec-2021		Ongoing
		1-Jan-2022	31-Dec-2022		
12	<b>RDR-EBD-2020-04</b> Design, Modeling, and Simulation of an Improved In-vessel Composting System	17-Feb-2020	31-Dec-2020		Ongoing
		1-Jan-2021	31-Dec-2021		
		1-Jan-2022	31-Dec-2022	30-June-2022	
13	<b>RDR-EBD-2020-05</b> Development of Air Biofilters for the Control of Ammonia	17-Feb-2020	31-Dec-2020		Ongoing
		1-Jan-2021	31-Dec-2021	31-March-2022	

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14	RDR-EBD-2020-06 Dissolved Copper Removal from Semiconductor Wastewater Effluent by Electrowinning Process	17-Feb-2020	31-Dec-2020		Completed
		1-Jan-2021	31-Dec-2021		
15	RDR-EBD-2020-07 Upgrading of the Emergency Water Disinfection System	1-Mar-2020	31-Dec-2021	31-March-2022	Ongoing
16	RDR-EBD-2021-01 Development of an Algal-Bacterial (ALBA) Wastewater Treatment System	1-Jul-2021	31-Dec-2021	30-Jun-2022	Ongoing
17	RDR-EBD-2021-02 Surface-Modified Zeolite Adsorbent System for VOC Pollutants in Indoor Air Laboratories	1-Jan-2021	31-Dec-2022	31-Dec-2023	Terminated
18	RDR-EBD-2021-03 Biofilm inhibitory activity of Talisay (Terminalia catappa L.) leaf extract against shrimp pathogen Vibrio sp. and its potential as feed supplement Phase 1	1-Jan-2021	31-Dec-2021	31-March-2022	Ongoing
<b>FOOD PROCESSING DIVISION</b>					
19	RDR-FPD-2020-01 Development of Alternative Techniques for Okra Flakes/Sheets Processing	1-Apr-2020	31-Dec-2020	30-Jun-2021	Completed
20	RDR-FPD-2020-03 Establishment of Food Safety System for High Risk Bakery Products for Public Consumption	1-Jan-2020	31-Dec-2020	30-Jun-2021	Completed
21	RDR-FPD-2020-05 Improving the Quality of Deep-Fat Fried Cassava Chips	1-Sept-2020	30-May-2021		Completed
22	RDR-FPD-2020-06 Natural Flavorings from Local Sources as Food Additive Study 1: Optimization of Spray Drying of Flavors from Fermented Fish and Shrimps	1-Apr-2020	31-Dec-2020	30-Jun-2021	Completed
23	RDR-FPD-2021-01 Modified Texturization Procedures of Restructured Fruits for Thermal Processing Applications	1-Jan-2021	31-Dec-2021	31-Mar-2022	Ongoing
24	RDR-FPD-2021-02 Thermal Process Validation of Traditional and Ethnic Bottled Products- Acidified-Pasteurized Vegetables (Ubod, Ampalaya and Mixed Vegetables)	1-Jan-2021	31-Dec-2021	31-Mar-2022	Ongoing
25	RDR-FPD-2021-03 Antimicrobial Activity of Natural Food Ingredients (PDS)	1-Jan-2021	31-Dec-2021	30-Jun-2022	Ongoing
26	RDR-FPD-2021-04 Improvement of Functional Components of Existing Horizontal Water Spray Retort	1-Apr-2021	31-Mar-2022		Ongoing
27	RDR-FPD-2021-05 Ultrasonic Assisted Extraction (UAE) and Microencapsulation of Virgin Coconut Oil (VCO): Study 1: Development of UAE and Microencapsulation Processes. Study 2: Bench Scale Production of Three Processes	1-Mar-2021	31-Dec-2021		Completed
		1-Jan-2022	31-Dec-2022		Ongoing
28	RDR-FPD-2021-06 Development of New Shelf Stable Food Products from Fruits, Grains and Vegetables (GAD Project Phase 3)	1-Jan-2021	31-Dec-2021		Completed
<b>MATERIALS SCIENCE DIVISION</b>					

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29	<b>RDR-MSD-2021-01</b> 3D-Printed Carbon-based Flexible Piezoresistive Wearable Sensor for Smart Device Gesture to Speech Applications - Year 1	1-Jan-2021	31-Dec-2021		Completed
30	<b>RDR-MSD-2021-02</b> Porous Nanocarriers for Drug Delivery Applications - Year 2	1-Jan-2021	31-Dec-2021		Completed
31	<b>RDR-MSD-2021-03</b> Superparamagnetic Iron Oxide Nanoparticles (SPIONS) from Natural Mineral Deposits for Industrial and Biomedical Applications - Phase 2	1-Jan-2021	31-Dec-2021		Completed
32	<b>RDR-MSD-2021-04</b> Development of an Antimicrobial Wound Dressing from Bacterial Cellulose-Nanoclay composite - Phase 1	1-Jan-2021	31-Dec-2021		Completed
33	<b>RDR-MSD-2021-05</b> Development of Bioinspired Composite Membrane Separators for Advanced Rechargeable Lithium-ion Batteries - Phase 1: Fabrication of Bioinspired Composite Membrane Separators from Abaca Fibers	1-Jan-2021	31-Dec-2021		Completed
<b>PACKAGING TECHNOLOGY DIVISION</b>					
34	<b>RDR-PTD-2019-06</b> Development of Intelligent Packaging Colorimetric Sensor as Total Volatile Base Nitrogen (TVBN) Indicator	1-Jun-2019	31-Dec-2019	31-Mar-2021	Completed
		1-Jan-2020	31-Dec-2020	30-Jun-2021	
35	<b>RDR-PTD-2020-01</b> Development and Assessment of bacterial cellulose derived from fruit waste as a bio-based plastic film	1-Jan-2020	31-Dec-2020	31-Dec-2021	Completed
36	<b>RDR-PTD-2020-02</b> Establishment of Shelf Life and Safety of Chilled Ready to Heat and Freshly Cooked Ready to Eat Foods Sold in Convenience Stores and Delivery Service	1-Jan-2020	31-Dec-2020	31-Mar-2021	Completed
37	<b>RDR-PTD-2020-03</b> Shelf life extension of Fresh-cut pineapple application of alginate-based edible coating with lemongrass essential oil	16-Jan-2020	15-Jan-2021	17-Dec-2021	Completed
38	<b>RDR-PTD-2020-04</b> Development of anti-oxidant film based on chitosan containing spent ground coffee extract (Y1)	1-Jan-2020	30-Jun-2021	31-Oct-2021	Completed
39	<b>RDR-PTD-2020-05</b> Exposure assessment of Filipino Consumers to benzophenones migrated from paper and paperboard used as packaging for food and beverages (Y1)	1-Jun-2020	31-Oct-2021	30-Nov-2021	Completed
40	<b>RDR-PTD-2021-01</b> Application of Eye-Tracking Technology for evaluating packaging design impact on	1-Apr-2021	31-Dec-2021		Terminated
41	<b>RDR-PTD-2021-02</b> Development of random vibration test procedures/methods using Acquired shock and vibration data in the last leg delivery of small products within Metro Manila	1-Aug-2021	30-Jun-2022	Jan 1, 2022 to Dec. 31, 2022	Ongoing

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42	<b>RDR-PTD-2021-03</b> Quality and Safety Monitoring of Chilled Ready to Heat/Eat Foods Using Intelligent Packaging with Time Temperature Indicators	1-Apr-2021	31-Dec-2021		Ongoing
		1-Jan-2022	31-Mar-2022		
43	<b>RDR-PTD-2021-04</b> Development of Three (3) New RTE Disaster Relief Foods for Vulnerable Groups (elderly and children)	1-Apr-2021	31-Mar-2022		Ongoing
		1-Apr-2022	31-Mar-2023		
44	<b>RDR-PTD-2021-06</b> Preliminary Study on Epoxidized Soybean Oil Migrating from Metal Closure into Bottled Spanish-Style Sardines	1-Jul-2021	30-Jun-2022		Ongoing
		1-Jul-2022	28-Feb-2023		

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<b>PLANNING AND MANAGEMENT INFORMATION SYSTEMS DIVISION</b>					
45	<b>LFP-PMISD-2020-01</b> ITDI Information Technology Capability Enhancement and Sustainability	1-Jan-2020	31-Dec-2020		Ongoing
		1-Jan-2021	31-Dec-2021		
		1-Jan-2022	31-Dec-2022		
<b>TECHNOLOGICAL SERVICES DIVISION</b>					
46	<b>RDR-TSD-2020-01</b> Market Testing of FIC Technologies/Products through collaboration with existing adopters	1-Jan-2020	31-Dec-2020	30-Jun-2021	Completed
<b>STANDARDS AND TESTING DIVISION</b>					
47	<b>RDR-STD-2021-01</b> Development and Validation of HPLC Methods for Food Samples	1-Jan-2021	31-Dec-2021	31-Mar-2022	Ongoing
48	<b>RDR-STD-2021-02</b> Development of Soil Quality Control Material for As, Cd, Hg, and Pb	1-Jan-2021	31-Dec-2021	31-Mar-2022	Ongoing
49	<b>RDR-STD-2021-03</b> Bench-scale Production, Verification of Optimized Parameters and Sensory Evaluation for the Market Research of Halal Cosmetics and Toiletries	17-May-2021	31-Oct-2021		Completed
<b>NATIONAL METROLOGY DIVISION</b>					
<b>Enhancement of the Competence and Capabilities of the National Metrology Laboratory of the Philippines</b>					
50	<b>RDRD-2017-NMD-01</b> Project 1 : Chemical Metrology for Organic Contaminants in Food and Water	1-Jan-2017	31-Dec-2017		Ongoing
		1-Jan-2018	31-Dec-2018		
		1-Jan-2019	31-Dec-2019		
		1-Jan-2020	31-Dec-2020		
		1-Jan-2021	31-Dec-2021	31-Dec-2022	
51	<b>RDRD-2017-NMD-02</b> Project 2 : Chemical Metrology for Inorganic Toxic Elements in Food and Water	1-Jan-2017	31-Dec-2017		Ongoing
		1-Jan-2018	31-Dec-2018		
		1-Jan-2019	31-Dec-2019		
		1-Jan-2020	31-Dec-2020		
52	<b>RDRD-2017-NMD-03</b> Project 3 : Biological Metrology for Microorganisms in Food	1-Jan-2017	31-Dec-2017		Ongoing
		1-Jan-2018	31-Dec-2018		
		1-Jan-2019	31-Dec-2019		
		1-Jan-2019	31-Dec-2019		
		1-Jan-2020	31-Dec-2020		
53	<b>RDRD-2017-NMD-04</b> Project 4: Strengthening the Physical Metrology Capabilities of the National Metrology Laboratory (NML)	1-Jan-2017	31-Dec-2017		Ongoing
		1-Jan-2018	31-Dec-2018		
		1-Jan-2019	31-Dec-2019		
		1-Jan-2019	31-Dec-2019		
		1-Jan-2020	31-Dec-2020		
			30-Jun-2022		

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