

**MODULAR MULTI-INDUSTRY INNOVATION CENTER (MMIC)**  
**FOR OILS, BLENDS AND SAUCES**

**Nut/Seed Oil Line**

<b>List of products</b>	<b>Characteristics</b>
	<ul style="list-style-type: none"><li>- The oils showed minimal inhibition against <i>E.coli</i> and <i>S. aureus</i> and is negative to total plate count (TPC)</li></ul>
1. calamansi seed oil	<ul style="list-style-type: none"><li>- calamansi seeds are by-products from calamansi juice processing</li><li>- calamansi seeds are dried in cabinet dryer and oil is mechanically extracted using hydraulic oil press</li><li>- contain high amount of linoleic and palmitic acid</li></ul>
2. pili pulp and peels oil	<ul style="list-style-type: none"><li>- pili drupes are from Sorsogon</li><li>- wet method extraction of pili pulp and peels oil and is mechanically extracted using screw press</li><li>- contain high amount of oleic and palmitic acid</li></ul>

## Mix Blend Powder Line

List of products	Characteristics
<b>spray-dried herbal teas</b> from:	<ul style="list-style-type: none"> <li>- The teas are extracted using the MMIC process and spray-dried using the FIC spray-dryer.</li> <li>- The chemical composition analysis of spray dried herbal teas showed the presence of K, Ca, Cr, Mn, Fe, Ni, Cu, Zn, Br, Rb, Sr, Y, Sn, Te, Yb, Re, Ti and Os.</li> </ul>
1. guyabano leaves	
2. banaba leaves	- particle size of 1.45-86.4um
3. malunggay leaves	- particle size of 0.991-127.0 um
4. mangosteen rind	- particle size of 1.28-111.0 um
<b>dietary supplements:</b>	The tablets are prepared using a rotary tableting machine
5. calamansi peels and pulp tablet	
6. mango peels tablet	
7. calamansi peels and pulp and mango peels tablet	
<b>dietary fiber powders:</b>	Peels, pulp, seeds and core are dried in a cabinet dryer and ground using hammer mill.
8. calamansi peels and pulp	- calamansi peels and pulp are by-

	<p>products from calamansi processing</p> <ul style="list-style-type: none"> <li>- total dietary fiber content of 66.57%</li> <li>- contain minerals/elements K, Ca, Ti, Mn, Fe, Ni, Cu, Zn, Br, Rb, Sr, Y, Zr, Sn, Te, Eu, Yb, Re and Os.</li> <li>- particle size of 1.88-310.0um while the mango peels is 3.55-666.0um</li> <li>- negative to pesticide residue</li> </ul>
9. mango peels	<ul style="list-style-type: none"> <li>- mango peels are by-products from mango processing</li> <li>- total dietary fiber content of 59.99%</li> <li>- contain minerals/elements K, Ca, Ti, Mn, Fe, Ni, Cu, Zn, Br, Rb, Sr, Y, Zr, Sn, Te, Eu, Yb, Re and Os.</li> <li>- particle size of 3.55-666.0um</li> <li>- negative to pesticide residue</li> </ul>
10. pili peels and pulp	<ul style="list-style-type: none"> <li>- pili peels and pulp are by-products from pili oil extraction</li> <li>- total dietary fiber content of 67.23%</li> <li>- contain minerals/elements K, Ca, Ti, Mn, Fe, Ni, Cu, Zn, Br, Rb, Sr, Y, Zr, Sn, Te, Eu, Yb, Re and Os.</li> <li>- particle size of 1.88-310.0um</li> </ul>

	- negative to pesticide residue
11. tomato peels	- tomato peels are by-products from tomato processing - total dietary fiber content of 79.96%
12. tomato seeds	- tomato seeds are by-products from tomato processing - total dietary fiber content of 61.10%
13. banana peels	- total dietary fiber content of 48.22 to 51.64%
14. pineapple peels	
15. pineapple core	
16. pineapple pulp	

### Liquids/Emulsions Line

List of products	Characteristics
1. toothpaste with calamansi seed oil	- calamansi seed oil is used as bioactive component
2. mouthwash with calamansi seed oil	- calamansi seed oil is used as bioactive component
3. mayonnaise with virgin coconut oil	- virgin coconut oil is used
4. mayonnaise with pili peels and pulp oil	- pili peels and pulp oil is used
5. tomato sauce with virgin coconut oil	- tomato pomace, by-products from tomato processing, is used

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6. tomato sauce with pili peels and pulp oil	- tomato pomace, by-products from tomato processing, is used - pili peels and pulp oil
7. basil sauce with pili peels and pulp oil	- basil is suspended pili peels and pulp oil
8. pili peels and pulp oil with onion and garlic	- onion and garlic is suspended in pili peels and pulp oil
9. virgin coconut oil with onion and garlic	- onion and garlic is suspended in virgin coconut oil
<b>Ready-to-drink herbal tea from:</b>	Ready-to-drink herbal teas are prepared using the MMIC process
10. guyabano leaves	
11. banaba leaves	
12. malunggay leaves	
13. mangosteen rind	
<b>Ready-to-drink herbal tea with stevia from:</b>	Ready-to-drink herbal teas with stevia are prepared using the MMIC process
14. guyabano leaves	
15. banaba leaves	
16. malunggay leaves	
17. mangosteen rind	
<b>Ready-to-drink herbal milk tea from:</b>	Ready-to-drink herbal milk teas are prepared using the MMIC process

18. guyabano leaves	
19. banaba leaves	
20. malunggay leaves	
21. mangosteen rind	