



Yamato Scientific Co., Ltd.

Harumi Triton Square Office Tower Y (36F)

Tel : +81-3-5548-7122 Fax : +81-3-5548-0132

SPRAY DRYER PRELIMINARY SURVEY FORM

1 Company Information

Industry	
Company Name	
Address	
Contact Person	
Phone Number	
Email Address	

2 Spray Dryer Model Interested In

Model	Description	Check Preference
ADL311SA	Compact & Economical Spray Dryer System	<input type="checkbox"/>
GB210A	Versatile Spray Dryer System	<input type="checkbox"/>
GB210B	Versatile Granulation Spray Dryer System	<input type="checkbox"/>
DL410	Large Spray Dryer System	<input type="checkbox"/>
GAS410	Organic Solvent Recovery Unit	<input type="checkbox"/>
GWS410	Organic Solvent Washing Unit	<input type="checkbox"/>

3.1 Sample and Application

Application				Sample Description (indicate chemical name if possible)
Food and Feed	<input type="checkbox"/>	Metal Powder	<input type="checkbox"/>	
Pharmaceutical	<input type="checkbox"/>	Plastic	<input type="checkbox"/>	
Ceramic	<input type="checkbox"/>	Others	<input type="checkbox"/>	
Chemical	<input type="checkbox"/>			

3.2 Sample Composition and Characteristics

Solvent Name	
% of Non-volatile Content	
pH	
Viscosity (cP)	

* To spray and form small droplets, viscosity needs to be lower than 300 cP

3.3 If with drying temperature limit, please provide details:

Melting point (°C)	
Glass transition temperature (°C)	
Temperature limit for the sample (°C)	

3.4 Sample Condition

Conditions	Check
Solution	<input type="checkbox"/>
Slurry	<input type="checkbox"/>
Emulsion	<input type="checkbox"/>
Others	<input type="checkbox"/>

3.5 For SLURRY sample:

Primary particle size (µm)	
Particle shape (spicula, sphere, flattened, etc)	
Attenuation (if necessary), acceptable?	<input type="checkbox"/> Yes <input type="checkbox"/> No

4.1 Purpose of Spray Drying

Target	Check
Drying	<input type="checkbox"/>
Fine powder	<input type="checkbox"/>
Agglomeration	<input type="checkbox"/>
Amorphous	<input type="checkbox"/>
Encapsulation	<input type="checkbox"/>
Others	<input type="checkbox"/>

4.2 Desired Particle Size (µm)

Particle size	Check
0.3 ~ 2	<input type="checkbox"/>
2 ~ 10	<input type="checkbox"/>
10 ~ 25	<input type="checkbox"/>
25 ~ 50	<input type="checkbox"/>
Over 50	<input type="checkbox"/>

5 Handling precautions (carcinogenic, corrosive, irritant, magnetic, ignitable, etc)

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NOTE:

When information is reviewed and approved by Yamato, a fee of **\$800 for a one day test** is collected prior to testing. Requesting party is responsible for shipping cost of the sample to and from Santa Clara, CA or Japan factory, if necessary.

ADL311SA / GB210 vs. DL410 SPRAY DRYER

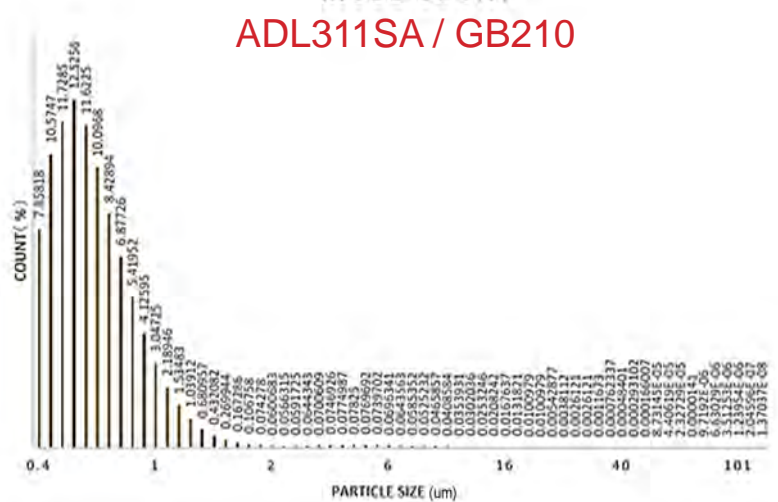
Particle Size Comparison

Can a Large Spray Dryer produce the same particle size as a Compact Spray Dryer? **Yes!**

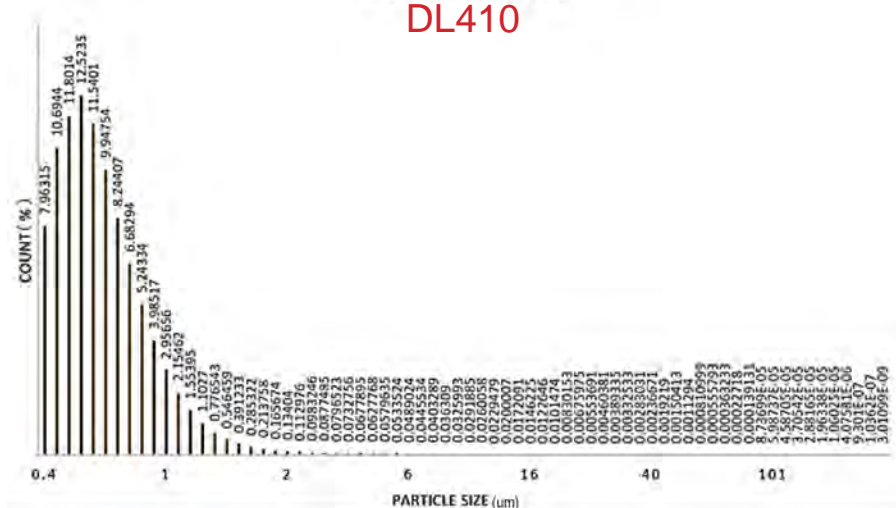
ADL311SA / GB210 "Compact"	CHARACTERISTICS	DL410 "Large"
Statistic count (average)		
100%	Count	100%
0.578 um	Average Diameter	0.577 um
0.624 um	Median Diameter	0.626 um
0.520	Average / Median	0.520
0.888 um	Mode Diameter	1.033 um



MODE COUNT
ADL311SA / GB210



MODE COUNT
DL410



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<https://www.yamato-scientific.com/>

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SPRAY DRYER

Facility Requirement Guide

ADL-311SA and GB-210 require:

1-Air compression system

- Recommended Air source requirement: 28L/min and 3Kg/cm² compressed air
- Minimum requirement: 13.5L/min and 2kg/cm² compressor air

2-Electrical power source and male plug

- Single phase AC220V (also supports 240V)
- Recommended plug specification: 250V and 30A

DL-410 requires:

1-Air compression system

- Recommended specifications: 28L/min and 8Kg/cm² compressed air
- Minimum requirement: 13.5 L/min and 4Kg/cm² compressed air

2-Electrical power source and male plug

- Single phase AC220V (also supports 240V)
- Recommended plug specification: 250V and 30A

GAS-410 requires:

1-N₂ gas source

- 99% or higher (99.998 recommended)
- Minimum requirement: 13.5L/min and 2kg/cm²

2-Electrical power source and male plug

- Single phase AC220V (also supports 240V)
- Recommended plug specification: 250V and 30A

PLEASE SEE YAMATO RECOMMENDATION FOR COMPRESSOR, AIR COMBINATION, POWER PLUGS.