

Lychee Pearl Beverage with WPI



INGREDIENTS

	Usage Levels (%)
White Pearls	100.00
Deionized water	89.3
Sucrose	10.0
Gellan gum	0.5
Xanthan gum	0.1
Titanium dioxide	0.1
Final Pearl Beverage	100.00
Water	88.95
Sucrose	6.42
Whey protein isolate (WPI)	2.22
White pearls	2.00
Phosphoric acid	0.33
Natural lychee flavor	0.04
Potassium sorbate	0.04

NUTRITIONAL CONTENT

Per 100g	
Calories	34kcal
Total Fat	0g
Saturated Fat	0g
Trans Fat	0g
Cholesterol	0mg
Total Carbohydrates	7g
Dietary Fiber	0g
Sugars	7g
Protein	2g
Calcium	3mg
Magnesium	1mg
Phosphorus	84mg
Potassium	12mg
Sodium	3mg

PREPARATION

White Pearls

1. **Blend powders thoroughly.**
2. **Add water, stir 1 minute with lightning mixer, lowest setting. Stir at highest speed on stir plate for 30 minutes.**
3. **De-gas solution 30 minutes in vacuum flask.**
4. **Carefully pour solution into large buret. Avoid entraining air.**
5. **Lower buret to ~1 cm above 600 ml of a 5% (w/w) calcium chloride bath.**
6. **Drip solution slowly into bath, with gentle stirring.**
7. **Once all beads are formed, leave them in solution for 30 minutes.**
8. **Remove beads from solution with mesh colander. Rinse beads well with distilled water, store in deionized water.**
9. **Autoclave 25 minutes in 5-6 containers. Store in refrigerator.**


Lychee Pearl Beverage with WPI

PREPARATION

(continues)

Final Pearl Beverage

1. **Add WPI to half of the formula water at ambient temperature and hydrate for 30 minutes.**
2. **Add remaining ingredients and mix. Adjust pH to 3.2-3.4.**
3. **Pasteurize at 195°C (383°F) for 30 seconds and cool to 25°C (77°F).**
4. **Add 2% sterilized beads per bottle and seal.**

Rely on the dynamic lineup of U.S. dairy to meet consumer demands for global product development. The U.S. Dairy Export Council (USDEC) offers resources on [ThinkUSAdairy.org](https://www.thinkusadairy.org) including a dairy ingredient supplier search, consumer, nutrition and product research, technical insights and prototype assistance to help develop and launch your next successful product.  [@ThinkUSAdairy](https://twitter.com/ThinkUSAdairy)

This formula serves as a reference. Product developers are encouraged to modify the formula to meet manufacturing and finished product specification needs. Developed at the Wisconsin Center for Dairy Research, University of Wisconsin-Madison. ©2014 U.S. Dairy Export Council.