

WHEY COOL

Aim

To create a protein based sports recovery powder for drinks, with 25% less sugar than the market leading average using whey protein isolate.

Need & Opportunity

Market research has found that there is a very wide range of electrolyte based sports drinks in the market. There is also a reasonable wide range of protein containing milkshake or milk based products. We are yet to find a drink with an appearance and consistency like that of Powerade or Gatorade yet containing enough protein to aid recovery post-exercise. Market research surveys show that sportspeople in the age bracket of 14-17 like drinking electrolyte sports drinks for both the salt replenishing benefits and the general thirst.

Method

Water	2L
Sugar	150g
Whey Protein Isolate	32g
Di sodium phosphate	1.4g
Monosodium citrate	1.4g
Acid solution	13g
Stevia solution	10ml
Raspberry Flavoring	1.2 g

- 1.Measure out water, sugar, WPI, acid solution, salts and stevia. Combine using a overhead mixer.
- 2.Set water bath to 75° C and leave to heat.
- 3.Add colours and flavours.
- 4.Transfer to individual heat safe containers if necessary.
- 5.Using a clean thermometer monitor the temperature of the mixer.
- 6.When the temperature reaches 75° C, keep at temperature for 15 seconds before removing the containers from the water bath.
- 7.Bottle immediately

Challenges & Problems

Purchasing Ingredients -ingredients were ordered from suppliers.
WPI 895 doesn't dissolve easily, WPI 8855 was sourced.
Ran out of WPI 8855 for our tasting panel, used WPI 895 - our drinks were slightly cloudy.
Lime flavouring was spilled. A different lime flavour was obtained.
Heat treating the drinks at 75° C, samples 1 and 2 looked cloudy and a precipitate formed. We set the temperature to 78 degrees Celsius.



Future Developments

Future developments would definitely include a lemon-lime flavor as well as potentially increasing whey content and reducing sugar. It would also be good to put more research into finding a better colour for the drink, as the red amaranth colouring came out much more pink than expected.

Conclusion & Reflection

To conclude, we can confidently say that we have created a product which is unique to the New Zealand market. It is a protein based sports drink with a appearance and consistency much like the popular refreshing electrolyte bases drinks that lead the sports drinks market right now.



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