

# 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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