Buttermilk – a strategic review of opportunities and applications

Report # 4 in Dairymark.com’s ‘Target business opportunities’ series of publications

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This report is predicated by the fact that there is a significant amount of buttermilk produced each year. On that basis that 4.13 million mt of butter is produced on an industrial scale p.a., this equates to around 410,000 buttermilk powder equivalent. Of course not all buttermilk is recovered, and not all is converted to BMP. Nevertheless the volume of buttermilk solids produced for commercial purposes is significant, and is increasingly recognized as containing some unique components – including protein & lipid material with purported nutraceutical qualities that place the material as a greater potential goldmine than the currency of whey stream value-adding that is very much in fashion.

Buttermilk solids are widely recognized as the liquid product remaining after whole milk is churned. It typically contains more fat than skim milk, can be more acidic, and is recognized as having a mild laxative effect, and is widely accepted as having applications in feed systems. But, this report does not look at buttermilk for feed. Nor does it consider buttermilk as a cultured product made from pasteurized or ultra-pasteurized skim milk. The focus is squarely on buttermilk derived from four essential dairy processing activities:

- Sweet buttermilk derived from conventional creamery butter churning operations
- Cultured buttermilk derived by churning cultured cream during the manufacture of lactic butter
- Buttermilk arising from phase inversion during the manufacture of AMF
- Whey buttermilk arising from the churning of whey cream

There is plenty of knowledge about the manufacturing, properties and applications of primary buttermilk forms - fresh buttermilk, concentrated buttermilk and buttermilk powder - and buttermilk used in blends, fat-filled buttermilk products, and the like. This report refreshes these areas with a perspective on the future. The reader is also drawn to some key developing fields, including:

- Derivation of buttermilk from AMF manufacture
- Utilizing buttermilk for yield improvements, tailoring specific outcomes (high fat SMP, high fat BMP
- Second stage separation with applications in low fat table spreads, standardizing cheese milk, for manufacturing table cream, to improve the texture of ice cream products
- UF concentration of buttermilk with various applications
- A two-step UF/MF process delivering a product for various applications
- SCFE of buttermilk for high value, high end derivatives
- MFGM isolation
- Buttermilk as a source of unique dairy protein material
- Fractionation of buttermilk – deriving lipids, proteins
- Buttermilk as an ingredient in cheese manufacture

The report contains 84 pages and can be purchased at a cost of Euros 4,140 (Australian subscribers $A7,285 including GST).
About Dairymark.com

Dairymark.com is a division of Shainwright Consulting & Research Group Pty Ltd, and is a specialist dairy industry intelligence and consulting organization. The company has completed a number of strategic, market and business development dairy research assignments for Australian and international clients. Recent examples include:

- Bangladesh dairy market study
- An overview of global dairy supply and demand
- A longitudinal dairy pricing study
- A strategic review of dairy industry patent activity
- A strategic review of dairy R&D activity
- A strategic review of trends in whey permeate utilization
- A study of the Australasian dairy industry
- Strategic research identifying trends and opportunities in Asian feed markets for dairy ingredients

In addition the company has published multi-client reports, including:

- Milk ingredients – a strategic review of opportunities and applications in the oral care industry
- Dairy carbohydrates – a strategic review of opportunities and applications
- Dairy permeates – a strategic review of opportunities and applications

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Table of contents

1. Executive Summary .................................................................................................................. 1
  1.1. A strategic precursor to the report ................................................................................... 1
  1.2. Executive synopsis ............................................................................................................ 3

2. Fluid buttermilk......................................................................................................................... 5
  2.1. Buttermilk – its definition & composition ........................................................................ 5
  2.2. Buttermilk from anhydrous milk fat ............................................................................... 5
  2.3. Buttermilk – yield influences ......................................................................................... 6
  2.4. Separation of cream from buttermilk – properties & applications .................................. 8

3. Concentrated buttermilk ......................................................................................................... 10
  3.1. Conventional concentrated buttermilk ............................................................................ 10
  3.2. UF concentration of buttermilk ..................................................................................... 11

4. Buttermilk powder .................................................................................................................. 13
  4.1. Definition & composition ............................................................................................... 13
  4.2. Buttermilk powder – stability attributes ........................................................................ 21
  4.3. Functional properties versus alternative dairy powders ............................................... 21
  4.4. Functional properties versus non-dairy material ............................................................ 25

5. Fractionation of buttermilk .................................................................................................... 27
  5.1. Filtration processes ....................................................................................................... 27
  5.2. Microfiltration processes for buttermilk ......................................................................... 28
  5.3. Super-critical fluid extraction – arising interest for buttermilk processing ..................... 29

6. MFGM & phospholipid extraction ........................................................................................ 31
  6.1. Isolation of MFGM ....................................................................................................... 31
  6.2. Membrane filtration for phospholipid recovery from buttermilk ................................... 32
  6.3. The Astaire process – extracting MFGM concentrate .................................................... 36
  6.4. The Corredig process – deriving MFGM isolate ............................................................ 38

7. The milk fat globule membrane ............................................................................................. 40
  7.1. MFGM – a unique dairy material ................................................................................ 40
  7.2. The proteins in the MFGM .......................................................................................... 42
  7.3. The lipids in the MFGM ............................................................................................... 44
  7.4. Physico-chemical properties of MFGM ....................................................................... 44
  7.5. The therapeutic role of MFGM constituents ................................................................. 45

8. Milk lecithin ............................................................................................................................. 48
  8.1. Lecithin – an overview ................................................................................................. 48
  8.2. Milk lecithin – its definition & constituents .................................................................. 49

9. Buttermilk as an ingredient in blends .................................................................................. 51
  9.1. Buttermilk in ice cream ............................................................................................... 51
  9.2. Buttermilk composition in blends – bakery & other applications ................................. 52
  9.3. Product specifications – buttermilk blends ................................................................. 54

10. Buttermilk used in cheese manufacture .......................................................................... 59
  10.1. Use of UF buttermilk in the manufacture of reduced fat cheddar cheese ................. 59
  10.2. Application of UF sweet buttermilk in the manufacture of reduced fat process cheese .. 61
  10.3. Effect of type of concentrated sweet cream buttermilk on pizza cheese manufacture, yield & functionality .. 64
10.4. Manufacture of reduced fat mozzarella cheese using UF sweet buttermilk & homogenized cream ................................................................. 68
10.5. The influence of buttermilk on the organoleptic properties of low-fat cheddar cheese ... 70

11. Patent review ........................................................................................................................ 71

12. Other innovation ................................................................................................................... 77
   12.1. MFGM as a delivery system for liposoluble nutrients ................................................... 77
   12.2. Enzymatic modification of sphingomyelin for cosmetic and pharmaceutical applications 77
   12.3. Purification of MFGM fragments out of whey & buttermilk by filtration techniques .... 77
   12.4. Engineering the functionality of dairy foods by enzymatic modification of milk phospholipids .......................................................... 78
   12.5. Buttermilk used in Domiati cheese manufacture of potential benefit to people with high blood cholesterol ................................................................. 78
   12.6. Properties, analysis & purification of milk polar lipids .................................................. 80
   12.7. Dried buttermilk containing GOS - process layout and verification ......................... 80
   12.8. Physical properties of cream reformulated with fractionated milk fat and milk-derived components .................................................................................................................. 80
   12.9. Phospholipid and sphingolipid distribution during processing of milk, butter & whey .... 81
   12.10. Application of UF buttermilk and BMP in yoghurt manufacture .............................. 81
   12.11. Application of phospholipids extracted from bovine milk to the reconstitution of cream using butter oil ............................................................. 81
   12.12. Dairy milk phospholipids in the prevention of atherosclerosis ................................ 81
   12.13. Advanced processing techniques for niche ingredients from dairy by-product streams 82
   12.14. Using a microfluidizer for preparation of liposomes from MFGM phospholipids ....... 82
   12.15. Milk phospholipids used for ‘instantizing’ colostrum products .............................. 83

13. Bibliography .......................................................................................................................... 84
List of Tables

Table 1: Typical composition of buttermilk & other fluid milk products (%)........................................ 5
Table 2: Recovery of fat from buttermilk added in varying proportions to whole milk before separation (%) ....................................................................................................................... 7
Table 3: Quantity of butterfat in buttermilk arising daily from a 40,000 mt butter factory, for different percentage fat contents of the buttermilk (kg). ................................................................. 7
Table 4: Properties of buttermilk from buttermilk cream butter compared with butterfat from normal butter .................................................................................................................................. 8
Table 5: The composition of a selection of fluid and concentrated buttermilk products ..................... 10
Table 6: Composition of UF BMP versus other dairy material .............................................................. 11
Table 7: Pre-mix for yoghurt manufacture using buttermilk & NFDM ................................................. 12
Table 8: WESTPRO Buttermilk Powder 5100 Series – Product Specification .................................... 14
Table 9: Clover Fonterra Ingredients Buttermilk Powder – Product Specification .............................. 15
Table 10: Farmers Co-op Creamery Dry Sweet Cream Buttermilk – Product Specification .......... 17
Table 11: Irish Dairy Board Buttermilk Powder (6%) – Product Specification ................................. 18
Table 12: Irish Dairy Board Buttermilk Powder (11.1%) – Product Specification .............................. 19
Table 13: Gross composition (%) of various buttermilk powders and other dried milk products .... 21
Table 14: Solubility of various protein powders – BMP versus alternatives ................................ ..... 25
Table 15: Water and fat-binding capacity and related effects on foaming properties of BMP versus alternative protein powders ..................................................................................................... 26
Table 16: Composition of fresh buttermilk, permeates & retentates from MF process – with temperature variation .................................................................................................................. 28
Table 17: Compositions of reconstituted buttermilk, permeates and retentates from MF process – with pore size variation .......................................................................................................... 28
Table 18: Examples of solvents used in super-critical fluid extraction processes ............................... 29
Table 19: Content and recovery of TS, lipids and protein in MFGM preparations utilizing different isolation methods ........................................................................................................... 32
Table 20: Composition of different whey streams, their concentrates and diafiltrates obtained on MF (VCR 20) with 0.2µm ........................................................................................................ 35
Table 21: Protein removal and phospholipid loss in the whey systems during MF (VCR 20) and DF with 0.2µm membranes ........................................................................................................ 35
Table 22: Composition of different buttermilk whey and their UF (VCR 4) and MF (VCR 20) concentrates ........................................................................................................................................ 35
Table 23: Extent of protein removal during UF & MF of buttermilk whey ............................................. 36
Table 24: Extent of phospholipid recovery by MF of buttermilk whey with 0.1µm ............................... 36
Table 25: The average composition from microfiltration – reconstituted BMP feedstock ............... 37
Table 26: The average composition from microfiltration – fresh buttermilk feedstock ................. 38
Table 27: Fat levels before and after SFE – reconstituted BMP feedstock ........................................ 38
Table 28: Typical composition of natural MFGM ............................................................................... 41
Table 29: Protein composition of the MFGM ..................................................................................... 42
Table 30: Components of MFGM and their purported health benefit associations .......................... 47
Table 31: Generic milk powder usage – bakery applications ............................................................. 52
Table 32: Typical composition of bakery blends ................................................................................. 52
Table 33: Kerry Ingredients – Beatreme shortening powders ............................................................... 53
Table 34: DAIRYMIX 444 – Product Specification ........................................................................... 54
Table 35: DAIRYMIX 175 – Product Specification ............................................................................ 55
Table 36: Irish Dairy Board Fat-filled Buttermilk Powder – Product Specification ......................... 57
Table 37: Composition of feed stream buttermilk & UF buttermilk used in reduced fat cheddar manufacture .................................................................................................................... 59
Table 38: Composition of cheese milk under different buttermilk treatments for reduced fat cheddar manufacture .................................................................................................................. 59
Table 39: Composition of reduced fat cheddar manufactured under different buttermilk treatments .......................................................................................................................... 60
Table 40: Yield & yield efficiencies of reduced fat cheddar cheese manufactured under different buttermilk treatments .............................................................................................................. 60
Table 41: Composition of feed stream buttermilk & UF buttermilk used in reduced fat process cheese manufacture ............................................................................................................... 61
Table 42: Composition of cheese milk under different buttermilk treatments for reduced fat cheddar manufacture ............................................................................................................. 62
Table 43: Composition of reduced fat cheddar cheese used as process cheese feed stream under different buttermilk treatments ............................................................................................................. 62
Table 44: Composition of reduced fat process cheese manufactured by different buttermilk treatments ...................................................................................................................................... 63
Table 45: Effect of buttermilk treatment on functional and rheological characteristics of reduced fat process cheese ...................................................................................................................................... 63
Table 46: Typical composition of concentrated sweet cream buttermilk derived by various processes versus alternative dairy materials ...................................................................................................................................... 64
Table 47: Typical percentage weights of part-skim milk, cream and concentrated buttermilks used in the preparation of standardized cheese milk ...................................................................................................................................... 65
Table 48: Typical composition of pasteurized standardized cheese milks, drain whey, press whey & cheeses ...................................................................................................................................... 65
Table 49: Fat, N & phospholipid recovery for pizza cheeses from sweet cream buttermilk concentrates ...................................................................................................................................... 67
Table 50: Actual & calculated cheese yields for pizza cheese manufactured using sweet cream buttermilk ...................................................................................................................................... 67
Table 51: Composition of buttermilk and milk before and after UF treatment ...................................................................................................................................... 68
Table 52: Composition of cheese milks with and without UF buttermilk used for reduced fat mozzarella manufacture ...................................................................................................................................... 69
Table 53: Composition of reduced fat mozzarella cheese made with and without UF buttermilk ...................................................................................................................................... 69
Table 54: Recent patent activity – buttermilk and related products ...................................................................................................................................... 71
Table 55: Composition of buffalo buttermilk used in Domiati cheese manufacture ...................................................................................................................................... 79
Table 56: Composition of Domiati cheese made from wholemilk (no buttermilk) and from a mixture of wholemilk and buttermilk (ratio 1:1, buttermilk:wholemilk) ...................................................................................................................................... 79

List of Figures

Figure 1: The process of phase inversion during the manufacture of anhydrous milk fat .......... 6
Figure 2: Comparative solubility of BMP & other dairy powders ................................................. 22
Figure 3: Comparative viscosity of BMP & other dairy powders ..................................................... 23
Figure 4: Comparative particle size of BMP & other dairy powders ................................................. 24
Figure 5: Comparative foaming capacity of BMP & other dairy powders ........................................ 25
Figure 6: The retentate/permeate characteristic of typical membrane processing technology .... 27
Figure 7: Process overview for three different methods of recovering MFGM .............................. 31
Figure 8: Whey generation from rennet coagulation of reconstituted buttermilk ......................... 33
Figure 9: Whey generation from citric coagulation of reconstituted buttermilk ......................... 33
Figure 10: The two-step UF/MF process for the manufacture of phospholipid rich powder ...... 34