

Birch Milk

- Gravity **16.8 BLG**
- ABV **7.1 %**
- IBU **28**
- SRM **27.5**
- Style **Sweet Stout**

Batch size

- Expected quantity of finished beer **15 liter(s)**
- Trub loss **5 %**
- Size with trub loss **15.8 liter(s)**
- Boil time **70 min**
- Evaporation rate **10 %/h**
- Boil size **19.3 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3.15 liter(s) / kg**
- Mash size **15.1 liter(s)**
- Total mash volume **19.9 liter(s)**

Steps

- Temp **64 C**, Time **90 min**
- Temp **72 C**, Time **10 min**
- Temp **78 C**, Time **10 min**

Mash step by step

- Heat up **15.1 liter(s)** of strike water to **71C**
- Add grains
- Keep mash **90 min** at **64C**
- Keep mash **10 min** at **72C**
- Keep mash **10 min** at **78C**
- Sparge using **9 liter(s)** of **76C** water or to achieve **19.3 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|----------------------------|-----------------|--------|-----|
| Grain | Viking Pale Ale malt | 2.5 kg (48.3%) | 80 % | 5 |
| Grain | Caramel/Crystal Malt - 10L | 1.5 kg (29%) | 75 % | 20 |
| Grain | Strzegom Karmel 150 | 0.4 kg (7.7%) | 75 % | 150 |
| Grain | Jęczmień palony | 0.2 kg (3.9%) | 55 % | 985 |
| Grain | Strzegom Czekoladowy 400 | 0.2 kg (3.9%) | 68 % | 400 |
| Sugar | Laktoza | 0.375 kg (7.2%) | 76.1 % | 0 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------|--------------------|--------|-----------|------------|
| Boil | East Kent Goldings | 30 g | 70 min | 5.1 % |
| Boil | English Golding | 30 g | 15 min | 4.8 % |
| Dry Hop | English Golding | 30 g | 14 day(s) | 4.8 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|------|------|------|--------|------------|
|------|------|------|--------|------------|

| | | | | |
|-------------|-----|-------|---------|--------|
| Safale S-04 | Ale | Slant | 1000 ml | Safale |
|-------------|-----|-------|---------|--------|

Extras

| Type | Name | Amount | Use for | Time |
|--------|----------|--------|-----------|----------|
| Flavor | ksylitol | 350 g | Secondary | 5 day(s) |