

Mleczna kawo-czekolada

- Gravity **14.7 BLG**
- ABV **6.1 %**
- IBU **33**
- SRM **33.1**
- Style **Sweet Stout**

Batch size

- Expected quantity of finished beer **25 liter(s)**
- Trub loss **5 %**
- Size with trub loss **27 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **32.5 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **22.4 liter(s)**
- Total mash volume **29.8 liter(s)**

Steps

- Temp **66 C**, Time **40 min**
- Temp **73 C**, Time **15 min**
- Temp **78 C**, Time **5 min**

Mash step by step

- Heat up **22.4 liter(s)** of strike water to **73.7C**
- Add grains
- Keep mash **40 min** at **66C**
- Keep mash **15 min** at **73C**
- Keep mash **5 min** at **78C**
- Sparge using **17.6 liter(s)** of **76C** water or to achieve **32.5 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|----------------------------|-----------------|-------|------|
| Grain | Weyermann - Pale Ale Malt | 3.63 kg (48.7%) | 85 % | 7 |
| Grain | Weyermann pszeniczny jasny | 0.97 kg (13%) | 80 % | 6 |
| Grain | Weyermann - Caraamber | 0.5 kg (6.7%) | 75 % | 65 |
| Grain | Weyermann - Carafa III | 0.76 kg (10.2%) | 70 % | 1024 |
| Grain | Pilzneński | 1.3 kg (17.4%) | 81 % | 4 |
| Grain | Carahell | 0.3 kg (4%) | 77 % | 26 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|---------|----------|--------|--------|------------|
| Boil | Citra | 25 g | 50 min | 12 % |
| Boil | Azacca | 15 g | 25 min | 11 % |
| Boil | Lubelski | 20 g | 10 min | 3.5 % |

Yeasts

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

| | | | | |
|--------------|-----|-----|--------|-----------|
| Safale US-05 | Ale | Dry | 11.5 g | Fermentis |
|--------------|-----|-----|--------|-----------|

Extras

| Type | Name | Amount | Use for | Time |
|--------|---------|--------|---------|--------|
| Flavor | Laktoza | 1000 g | Boil | 30 min |