

## #199 Mleczak kontratakuje

- Gravity **13.8 BLG**
- ABV **5.7 %**
- IBU **31**
- SRM **34.2**
- Style **Specialty Beer**

### Batch size

- Expected quantity of finished beer **20.3 liter(s)**
- Trub loss **7 %**
- Size with trub loss **21.7 liter(s)**
- Boil time **60 min**
- Evaporation rate **6 %/h**
- Boil size **23.4 liter(s)**

### Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3.16 liter(s) / kg**
- Mash size **15.2 liter(s)**
- Total mash volume **20 liter(s)**

### Steps

- Temp **69 C**, Time **60 min**
- Temp **78 C**, Time **1 min**

### Mash step by step

- Heat up **15.2 liter(s)** of strike water to **76.7C**
- Add grains
- Keep mash **60 min** at **69C**
- Keep mash **1 min** at **78C**
- Sparge using **13 liter(s)** of **76C** water or to achieve **23.4 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Malt pilzneński	2.1 kg (39.6%)	80 %	4
Grain	Viking Malt monachijski jasny	1.75 kg (33%)	79 %	15
Grain	Viking Malt karmelowy ciemny	0.25 kg (4.7%)	68 %	601
Grain	Viking Malt czekoladowy jasny	0.25 kg (4.7%)	68 %	400
Grain	Castle Malting kawowy	0.2 kg (3.8%)	68 %	500
Grain	Jęczmień palony	0.25 kg (4.7%)	55 %	1150
Sugar	Laktoza	0.5 kg (9.4%)	76.1 %	0

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Marynka PL 2022	30 g	60 min	9.5 %

### Yeasts

Name	Type	Form	Amount	Laboratory
FM13 Irlandzkie Ciemności	Ale	Liquid	40 ml	Fermentum Mobile