

Winter Orange

- Gravity **15.4 BLG**
- ABV **6.5 %**
- IBU **20**
- SRM **15.2**

Batch size

- Expected quantity of finished beer **23 liter(s)**
- Trub loss **5 %**
- Size with trub loss **24.2 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **29.2 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **18 liter(s)**
- Total mash volume **24 liter(s)**

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pilsner malt	1 kg (14.3%)	82 %	4
Grain	Viking Pale Ale malt	2 kg (28.6%)	80 %	5
Grain	Viking Munich Malt	2 kg (28.6%)	78 %	18
Grain	Karmelowy żytni Strzegom	1 kg (14.3%)	75 %	150
Liquid Extract	Miód Gryczany (Buckwheat Honey)	1 kg (14.3%)	70 %	40

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Marynka	20 g	60 min	10 %
Aroma (end of boil)	Cascade	20 g	8 min	6 %

Yeasts

Name	Type	Form	Amount	Laboratory
Safale S-04	Ale	Dry	11.5 g	Safale

Extras

Type	Name	Amount	Use for	Time
Flavor	orange skin dry	50 g	Boil	10 min
Spice	cynamon	40 g	Boil	60 min