

## #42 Christmas ale

- Gravity **15.2 BLG**
- ABV **6.3 %**
- IBU **15**
- SRM **12.1**
- Style **Christmas/Winter Specialty Spiced Beer**

### Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **21 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **25.3 liter(s)**

### Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **16.8 liter(s)**
- Total mash volume **22.4 liter(s)**

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Pilsner (2 Row) Ger	3.5 kg (59.3%)	81 %	4
Grain	Żytni	1.5 kg (25.4%)	85 %	8
Grain	Strzegom Czekoladowy jasny	0.3 kg (5.1%)	68 %	400
Sugar	Milk Sugar (Lactose)	0.3 kg (5.1%)	76.1 %	0
Grain	Grodziski pszeniczny wędzony dębem	0.3 kg (5.1%)	80 %	3

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Columbus/Tomahawk/Zeus	10 g	60 min	15.5 %

### Yeasts

Name	Type	Form	Amount	Laboratory
Mangrove Jack's M44 US West Coast	Ale	Slant	130 ml	Mangrove Jack's

### Extras

Type	Name	Amount	Use for	Time
Other	Śliwki suszone	400 g	Boil	10 min
Other	Suszone morele	200 g	Boil	10 min
Other	Jabłko	200 g	Boil	5 min
Spice	Cynamon	10 g	Boil	10 min