

## BELGIAN PALE ALE #54

- Gravity **12.9 BLG**
- ABV **5.2 %**
- IBU **32**
- SRM **6.9**
- Style **Belgian Pale Ale**

### 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 **12 %/h**
- Boil size **24.4 liter(s)**

### Mash information

- Mash efficiency **81 %**
- Liquor-to-grist ratio **4.38 liter(s) / kg**
- Mash size **20 liter(s)**
- Total mash volume **24.5 liter(s)**

### Steps

- Temp **64 C**, Time **20 min**
- Temp **72 C**, Time **45 min**
- Temp **78 C**, Time **5 min**

### Mash step by step

- Heat up **20 liter(s)** of strike water to **69C**
- Add grains
- Keep mash **20 min** at **64C**
- Keep mash **45 min** at **72C**
- Keep mash **5 min** at **78C**
- Sparge using **9 liter(s)** of **76C** water or to achieve **24.4 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Bestmalz - pale ale	2.85 kg (62.5%)	80.5 %	6
Grain	Bestmalz - monachijski I	1.14 kg (25%)	80 %	16
Grain	Weyermann - Abbey	0.34 kg (7.5%)	75 %	45
Grain	Weyermann - Carabelge	0.23 kg (5%)	74 %	30

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Warrior	10 g	60 min	14.7 %
Aroma (end of boil)	Styrian Golding	50 g	15 min	5.3 %

### Yeasts

Name	Type	Form	Amount	Laboratory
Mangrove Jack's M47 Belgian Abbey	Ale	Dry	10 g	Mangrove Jack's

### Extras

Type	Name	Amount	Use for	Time
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Water Agent	gips	3 g	Mash	---
Water Agent	kwask mlekowy [ml]	4.23 g	Mash	---
Water Agent	epsom	1.5 g	Mash	---
Water Agent	chlorek wapnia [ml]	3.44 g	Mash	---
Fining	mech irlandzki	3 g	Boil	5 min