

# Kumburak 13°

- Gravity **13.1 BLG**
- ABV ---
- IBU **37**
- SRM **6.3**
- Style **Bohemian Pilsener**

## Batch size

- Expected quantity of finished beer **54 liter(s)**
- Trub loss **5 %**
- Size with trub loss **56.7 liter(s)**
- Boil time **70 min**
- Evaporation rate **5 %/h**
- Boil size **62.9 liter(s)**

## Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **24 liter(s)**
- Total mash volume **32 liter(s)**

## Steps

- Temp **65 C**, Time **20 min**
- Temp **72 C**, Time **50 min**
- Temp **78 C**, Time **10 min**

## Mash step by step

- Heat up **24 liter(s)** of strike water to **72.5C**
- Add grains
- Keep mash **20 min** at **65C**
- Keep mash **50 min** at **72C**
- Keep mash **10 min** at **78C**
- Sparge using **46.9 liter(s)** of **76C** water or to achieve **62.9 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pilsner malt	6.5 kg (57%)	82 %	4
Grain	Carahell	0.5 kg (4.4%)	77 %	26
Grain	Strzegom Wiedeński	1 kg (8.8%)	79 %	10
Liquid Extract	Bruntal	3.4 kg (29.8%)	81 %	26

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Magnum	35 g	60 min	11.5 %
Boil	lunga	35 g	60 min	11 %
Aroma (end of boil)	hallertau tradition	20 g	30 min	6.3 %
Aroma (end of boil)	Hallertau Mittelfrüh	20 g	5 min	3.7 %

## Yeasts

Name	Type	Form	Amount	Laboratory
FM31 Bawarska Dolina	Lager	Liquid	30 ml	---

## Extras

Type	Name	Amount	Use for	Time
Fining	Whirfloc T	5 g	Boil	10 min