

# Happy new beer

- Gravity **17.3 BLG**
- ABV ---
- IBU **62**
- SRM **4.5**
- Style **Imperial IPA**

## Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **23 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **27.5 liter(s)**

## Mash information

- Mash efficiency **85 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **19.5 liter(s)**
- Total mash volume **26 liter(s)**

## Steps

- Temp **65 C**, Time **60 min**
- Temp **72 C**, Time **10 min**
- Temp **78 C**, Time **10 min**

## Mash step by step

- Heat up **19.5 liter(s)** of strike water to **72.5C**
- Add grains
- Keep mash **60 min** at **65C**
- Keep mash **10 min** at **72C**
- Keep mash **10 min** at **78C**
- Sparge using **14.5 liter(s)** of **76C** water or to achieve **27.5 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Golden Promise	4.5 kg (67.2%)	79.5 %	4
Grain	Maris Otter	2 kg (29.9%)	80.3 %	6
Sugar	cukier	0.2 kg (3%)	--- %	---

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Columbus/Tomahawk/Zeus	20 g	60 min	12.5 %
Boil	El Dorado	25 g	20 min	15 %
Boil	Mosaic	25 g	20 min	12 %
Aroma (end of boil)	Simcoe	20 g	5 min	13.2 %
Whirlpool	Citra	50 g	1 min	13.5 %
Whirlpool	El Dorado	50 g	1 min	15 %
Dry Hop	first dry hop Citra	50 g	3 day(s)	13.5 %
Dry Hop	first dry hop Mosaic	40 g	3 day(s)	12 %
Dry Hop	first dry hop Centennial	50 g	3 day(s)	9.5 %
Dry Hop	first dry hop El Dorado	25 g	3 day(s)	15 %

Dry Hop	second dry hop El Dorado	45 g	3 day(s)	15 %
Dry Hop	second dry hop Mosaic	35 g	3 day(s)	12 %
Dry Hop	second dry hop centennial	50 g	3 day(s)	9.5 %
Dry Hop	second dry hop Simcoe	30 g	3 day(s)	13.2 %

### Yeasts

Name	Type	Form	Amount	Laboratory
Safale US-05	Ale	Dry	11.5 g	Fermentis

### Extras

Type	Name	Amount	Use for	Time
Water Agent	gips piwowarski	10 g	Mash	60 min