

# ales

- Gravity **12.3 BLG**
- ABV ---
- IBU **56**
- SRM **5.4**
- Style **American Pale Ale**

## Batch size

- Expected quantity of finished beer **22 liter(s)**
- Trub loss **5 %**
- Size with trub loss **23.1 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **27.8 liter(s)**

## Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **15 liter(s)**
- Total mash volume **20 liter(s)**

## Steps

- Temp **65 C**, Time **60 min**

## Mash step by step

- Heat up **15 liter(s)** of strike water to **72.5C**
- Add grains
- Keep mash **60 min** at **65C**
- Sparge using **17.8 liter(s)** of **76C** water or to achieve **27.8 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Pale Ale	5 kg (100%)	79 %	6

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	chinook	30 g	60 min	11.2 %
Boil	chinook	20 g	30 min	11.2 %
Whirlpool	enigma	150 g	120 min	16.5 %

## Yeasts

Name	Type	Form	Amount	Laboratory
Mangrove Jack's M44 US West Coast	Ale	Dry	11 g	---

## Extras

Type	Name	Amount	Use for	Time
Fining	mech irlandzki	10 g	Boil	15 min
Water Agent	gips piwowarski	5 g	Mash	60 min