

# pale ale

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- Gravity **11.7 BLG**
- ABV **4.7 %**
- IBU **32**
- SRM **5.4**
- Style **American IPA**

## Batch size

- Expected quantity of finished beer **22 liter(s)**
- Trub loss **5 %**
- Size with trub loss **23.1 liter(s)**
- Boil time **80 min**
- Evaporation rate **10 %/h**
- Boil size **28.7 liter(s)**

## Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **15.3 liter(s)**
- Total mash volume **20.4 liter(s)**

## Steps

- Temp **50 C**, Time **15 min**
- Temp **62 C**, Time **30 min**
- Temp **72 C**, Time **15 min**
- Temp **77 C**, Time **1 min**

## Mash step by step

- Heat up **15.3 liter(s)** of strike water to **55C**
- Add grains
- Keep mash **15 min** at **50C**
- Keep mash **30 min** at **62C**
- Keep mash **15 min** at **72C**
- Keep mash **1 min** at **77C**
- Sparge using **18.5 liter(s)** of **76C** water or to achieve **28.7 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Pilzneński	2 kg (39.2%)	81 %	4
Grain	Viking Pale Ale malt	2.6 kg (51%)	80 %	5
Grain	Strzegom Bursztynowy	0.5 kg (9.8%)	70 %	49

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Lublin (Lubelski)	50 g	50 min	4 %
Boil	Lublin (Lubelski)	50 g	20 min	4 %

## Yeasts

Name	Type	Form	Amount	Laboratory
s-33	Lager	Slant	200 ml	---

## Notes

- franekca.pl.tl  
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