

# KPA (Kruszyńskie Pale Ale)

- Gravity **12.1 BLG**
- ABV **4.9 %**
- IBU **22**
- SRM **7.4**
- Style **Extra Special/Strong Bitter (English Pale Ale)**

## Batch size

- Expected quantity of finished beer **23 liter(s)**
- Trub loss **5 %**
- Size with trub loss **24.1 liter(s)**
- Boil time **70 min**
- Evaporation rate **10 %/h**
- Boil size **29.5 liter(s)**

## Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **16.5 liter(s)**
- Total mash volume **22 liter(s)**

## Steps

- Temp **67.5 C**, Time **70 min**
- Temp **78 C**, Time **10 min**

## Mash step by step

- Heat up **16.5 liter(s)** of strike water to **75.4C**
- Add grains
- Keep mash **70 min** at **67.5C**
- Keep mash **10 min** at **78C**
- Sparge using **18.5 liter(s)** of **76C** water or to achieve **29.5 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pale Ale Zero 5-7,5 EBC	4.5 kg (81.8%)	80 %	7
Grain	Viking Karmelowy Jasny 30EBC	0.3 kg (5.5%)	75 %	30
Grain	Płatki owsiane	0.4 kg (7.3%)	85 %	3
Grain	Viking Wiedeński 8-11 EBC	0.2 kg (3.6%)	79 %	10
Grain	Weyramann Caraaroma (R) 300-400 EBC	0.1 kg (1.8%)	--- %	350

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Marynka 8,5 % aa	20 g	55 min	8.5 %
Boil	Marynka 8,5 % aa	20 g	10 min	8.5 %
Boil	Żatecki 3,21 % aa	20 g	0 min	3.21 %

## Yeasts

Name	Type	Form	Amount	Laboratory
Safale S-04	Ale	Dry	11.5 g	Safale

## Extras

Type	Name	Amount	Use for	Time
Water Agent	gips piwowarski	2.5 g	Mash	70 min