

PAPA

- Gravity **13.6 BLG**
- ABV **5.6 %**
- IBU **33**
- SRM **4.8**
- Style **Extra Special/Strong Bitter (English Pale Ale)**

Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **10 %**
- Size with trub loss **22 liter(s)**
- Boil time **60 min**
- Evaporation rate **15 %/h**
- Boil size **27.6 liter(s)**

Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **15 liter(s)**
- Total mash volume **20 liter(s)**

Steps

- Temp **70 C**, Time **50 min**
- Temp **78 C**, Time **5 min**

Mash step by step

- Heat up **15 liter(s)** of strike water to **78.3C**
- Add grains
- Keep mash **50 min** at **70C**
- Keep mash **5 min** at **78C**
- Sparge using **17.6 liter(s)** of **76C** water or to achieve **27.6 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Weyermann - Pale Ale Malt	5 kg (100%)	85 %	7

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Lublin (Lubelski)	200 g	5 min	4 %
Boil	Sybilla	100 g	5 min	3.5 %
Boil	Marynka	50 g	5 min	10 %

Yeasts

Name	Type	Form	Amount	Laboratory
FM52 Amerykański Sen	Ale	Liquid	30 ml	Fermentum Mobile