

## African Roots

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- Gravity **11.4 BLG**
- ABV **4.6 %**
- IBU **87**
- SRM **4.6**
- Style **American IPA**

### Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **21 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **25.3 liter(s)**

### Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **13.5 liter(s)**
- Total mash volume **18 liter(s)**

### Steps

- Temp **44 C**, Time **10 min**
- Temp **52 C**, Time **20 min**
- Temp **62 C**, Time **40 min**
- Temp **72 C**, Time **10 min**
- Temp **78 C**, Time **10 min**

### Mash step by step

- Heat up **13.5 liter(s)** of strike water to **48C**
- Add grains
- Keep mash **10 min** at **44C**
- Keep mash **20 min** at **52C**
- Keep mash **40 min** at **62C**
- Keep mash **10 min** at **72C**
- Keep mash **10 min** at **78C**
- Sparge using **16.3 liter(s)** of **76C** water or to achieve **25.3 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Briess - Pale Ale Malt	4 kg (88.9%)	80 %	7
Grain	Strzegom Pszeniczny	0.5 kg (11.1%)	81 %	6

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	magnum	30 g	60 min	11.5 %
Boil	southern passion	40 g	40 min	11.7 %
Dry Hop	southern passion	60 g	7 day(s)	11.7 %

### Yeasts

Name	Type	Form	Amount	Laboratory
gęstwa	Ale	Slant	200 ml	---