

## Fränkisches Rotbier PK 2

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- Gravity **11.7 BLG**
- ABV **4.7 %**
- IBU **24**
- SRM **13.8**
- Style **Munich Dunkel**

### Batch size

- Expected quantity of finished beer **16 liter(s)**
- Trub loss **5 %**
- Size with trub loss **16.8 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **20.2 liter(s)**

### Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **12.3 liter(s)**
- Total mash volume **15.8 liter(s)**

### Steps

- Temp **55 C**, Time **5 min**
- Temp **63 C**, Time **30 min**
- Temp **72 C**, Time **30 min**
- Temp **76 C**, Time **5 min**

### Mash step by step

- Heat up **12.3 liter(s)** of strike water to **60C**
- Add grains
- Keep mash **5 min** at **55C**
- Keep mash **30 min** at **63C**
- Keep mash **30 min** at **72C**
- Keep mash **5 min** at **76C**
- Sparge using **11.4 liter(s)** of **76C** water or to achieve **20.2 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Pilsner Malz Best	3 kg (85.7%)	81 %	3
Grain	Melanoiden Malt	0.3 kg (8.6%)	80 %	70
Grain	Cara aroma (red)	0.1 kg (2.9%)	78 %	50
Grain	Carafa II Best	0.1 kg (2.9%)	65 %	1100

### Hops

Use for	Name	Amount	Time	Alpha acid
First Wort	Perle	1 g	120 min	9.7 %
Boil	Perle	10 g	60 min	9.7 %
Boil	Hallertau Spalt Select	20 g	20 min	5 %

### Yeasts

Name	Type	Form	Amount	Laboratory
Wyeast - 2206 Bavarian Lager	Lager	Liquid	50 ml	Wyeast Labs