

## #151 Ein Reich, ein Volk, ein Rotbier

- Gravity **13.1 BLG**
- ABV **5.3 %**
- IBU **41**
- SRM **9.9**
- Style **Northern German Altbier**

### Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **6 %**
- Size with trub loss **21.2 liter(s)**
- Boil time **60 min**
- Evaporation rate **6 %/h**
- Boil size **22.7 liter(s)**

### Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **3.05 liter(s) / kg**
- Mash size **14 liter(s)**
- Total mash volume **18.6 liter(s)**

### Steps

- Temp **57 C**, Time **12 min**
- Temp **64 C**, Time **50 min**
- Temp **72 C**, Time **30 min**
- Temp **78 C**, Time **1 min**

### Mash step by step

- Heat up **14 liter(s)** of strike water to **63.1C**
- Add grains
- Keep mash **12 min** at **57C**
- Keep mash **50 min** at **64C**
- Keep mash **30 min** at **72C**
- Keep mash **1 min** at **78C**
- Sparge using **13.3 liter(s)** of **76C** water or to achieve **22.7 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Steinbach wiedeński	2.85 kg (62%)	79 %	9
Grain	Viking Malt Red Active	0.95 kg (20.7%)	80 %	35
Grain	Weyermann melanoidynowy	0.55 kg (12%)	75 %	70
Grain	Viking Malt monachijski jasny	0.25 kg (5.4%)	80 %	15

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Tradition PL 2021	25 g	60 min	7 %
Boil	Tradition PL 2021	25 g	30 min	7 %
Aroma (end of boil)	Tradition PL 2021	30 g	5 min	7 %

### Yeasts

Name	Type	Form	Amount	Laboratory
Lallemand LalBrew Köln Koelsch	Ale	Dry	11 g	Lallemand