

## #35 Groenendael #1 Dark Strong Dubbel /FM20/

- Gravity **19.1 BLG**
- ABV ---
- IBU **21**
- SRM **43.6**
- Style **Belgian Dubbel**

### Batch size

- Expected quantity of finished beer **25 liter(s)**
- Trub loss **5 %**
- Size with trub loss **26.3 liter(s)**
- Boil time **180 min**
- Evaporation rate **10 %/h**
- Boil size **37.4 liter(s)**

### Mash information

- Mash efficiency **70 %**
- Liquor-to-grist ratio **3.5 liter(s) / kg**
- Mash size **29.4 liter(s)**
- Total mash volume **37.8 liter(s)**

### Steps

- Temp **55 C**, Time **0 min**
- Temp **66 C**, Time **60 min**
- Temp **71 C**, Time **15 min**
- Temp **76 C**, Time **10 min**

### Mash step by step

- Heat up **29.4 liter(s)** of strike water to **60C**
- Add grains
- Keep mash **0 min** at **55C**
- Keep mash **60 min** at **66C**
- Keep mash **15 min** at **71C**
- Keep mash **10 min** at **76C**
- Sparge using **16.4 liter(s)** of **76C** water or to achieve **37.4 liter(s)** of wort

### Fermentables

Type	Name	Amount	Yield	EBC
Grain	Strzegom Pilzneński	4.07 kg (44.5%)	80 %	4
Grain	Strzegom Pale Ale	1.27 kg (13.9%)	79 %	6
Grain	Maris Otter Pale Malt	1.23 kg (13.5%)	83 %	6
Grain	Weyermann pszeniczny jasny	0.59 kg (6.5%)	80 %	6
Grain	Cara Gold Castlemalting	0.4 kg (4.4%)	78 %	120
Grain	Monachijski Castle	0.2 kg (2.2%)	80 %	15
Grain	Weyermann - Acidulated Malt	0.16 kg (1.8%)	80 %	6
Grain	BESTMALZ - Best Wheat Malt	0.16 kg (1.8%)	82 %	4
Grain	Special B Castle	0.12 kg (1.3%)	70 %	350
Grain	Carafa I Weyermann	0.1 kg (1.1%)	70 %	900
Grain	Chocolate Malt	0.1 kg (1.1%)	60 %	900
Sugar	Candi Sugar, Dark	0.74 kg (8.1%)	78.3 %	542

### Hops

Use for	Name	Amount	Time	Alpha acid
Boil	lunga	14.75 g	170 min	11.6 %
Boil	East Kent Goldings	14.53 g	170 min	6.2 %

## Yeasts

Name	Type	Form	Amount	Laboratory
FM20 Białe Walonki	Wheat	Slant	500 ml	Fermentum Mobile

## Notes

- fermentacja  
18 -20 w 4 dni  
*Dec 31, 2016, 11:37 AM*