

# Belgian Pale Ale

- Gravity **12.9 BLG**
- ABV **5.2 %**
- IBU **17**
- SRM **7.9**
- Style **Belgian Pale Ale**

## 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 **15.6 liter(s)**
- Total mash volume **20.8 liter(s)**

## Steps

- Temp **64 C**, Time **20 min**
- Temp **72 C**, Time **60 min**
- Temp **78 C**, Time **1 min**

## Mash step by step

- Heat up **15.6 liter(s)** of strike water to **71.3C**
- Add grains
- Keep mash **20 min** at **64C**
- Keep mash **60 min** at **72C**
- Keep mash **1 min** at **78C**
- Sparge using **14.9 liter(s)** of **76C** water or to achieve **25.3 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	CastleMalting Pale Ale	3 kg (57.7%)	80 %	6
Grain	CastleMalting Monachijski	1.2 kg (23.1%)	80 %	15
Grain	CastleMalting Abbey	0.5 kg (9.6%)	75 %	45
Grain	Weyermann Carabelge	0.5 kg (9.6%)	80 %	33

## Hops

Use for	Name	Amount	Time	Alpha acid
Aroma (end of boil)	Lublin (Lubelski)	50 g	30 min	4 %

## Yeasts

Name	Type	Form	Amount	Laboratory
Mangrove Jack's M47 Belgian Abbey	Ale	Dry	10.5 g	Mangrove Jack's

## Extras

Type	Name	Amount	Use for	Time
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Water Agent	Brewferm Chlorek wapnia 33%	3 g	Mash	60 min
przy 3g chlorku wapnia potrzebne jest 6,8 ml roztworu				
Water Agent	Gips piwowarski	2 g	Mash	60 min
Water Agent	Kwas mlekowy	1 g	Boil	60 min
1 ml				
Fining	Whirlfloc	1.25 g	Boil	5 min
pH brzeczki powinno być w zakresie 5.0-5.5				
1.25g to pół tabletki				
Fining	Mangrove Jack's Liquid Beer Finings	20 g	Secondary	1 day(s)
24h przed butelkowaniem				

## Notes

- Parametry wody dla stylu  
Calcium (ppm)50-150  
Magnesium (ppm)0-30  
Alkalinity as CaCO<sub>3</sub>40-120  
Sulfate (ppm)100-300  
Chloride (ppm)50-100  
Sodium (ppm)<100  
Residual Alkalinity0-60

W moim przypadku 50% wody kranowej i 50% wody demineralizowanej + sole i kwas wspomniane w dodatkach

*Feb 4, 2020, 11:17 PM*

- Plan fermentacji:  
1-2 dzień w 18 st. C  
3-4 dzień w 19 st. C  
5-6 dzień w 20 st. C  
7 - do końca 21 st. C  
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