

# Koźlak jesienny

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- Gravity **17.3 BLG**
- ABV **7.4 %**
- IBU **24**
- SRM **25.7**
- Style **Traditional Bock**

## Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **21 liter(s)**
- Boil time **80 min**
- Evaporation rate **15 %/h**
- Boil size **28.8 liter(s)**

## Mash information

- Mash efficiency **70 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **24 liter(s)**
- Total mash volume **32 liter(s)**

## Steps

- Temp **60 C**, Time **1 min**
- Temp **63 C**, Time **20 min**
- Temp **65 C**, Time **10 min**
- Temp **72 C**, Time **40 min**
- Temp **75 C**, Time **10 min**
- Temp **78 C**, Time **5 min**

## Mash step by step

- Heat up **24 liter(s)** of strike water to **66.7C**
- Add grains
- Keep mash **1 min** at **60C**
- Keep mash **20 min** at **63C**
- Keep mash **10 min** at **65C**
- Keep mash **40 min** at **72C**
- Keep mash **10 min** at **75C**
- Keep mash **5 min** at **78C**
- Sparge using **12.8 liter(s)** of **76C** water or to achieve **28.8 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Bestmalz - Munich Malt	3 kg (37.5%)	80 %	18
Grain	Bestmalz - Vienna Malt	2 kg (25%)	77.5 %	7
Grain	Castlemalting - Pilznieński	1.95 kg (24.4%)	81 %	4
Grain	Weyermann - Caraaroma	0.2 kg (2.5%)	78 %	400
Grain	Weyermann - Carahell	0.2 kg (2.5%)	77 %	26
Grain	Słód Caramunich Typ II Weyermann	0.2 kg (2.5%)	73 %	120
Grain	BESTMALZ - Best Melanoidin	0.2 kg (2.5%)	75 %	71
Grain	Fawcett - Pszeniczny Czekoladowy	0.15 kg (1.9%)	73 %	1001

Pod koniec zacierania (5 min)				
Grain	BestMalz - Extra black	0.09 kg (1.1%)	65 %	1400
Pod koniec zacierania (5 min)				

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Northern Brewer	10 g	30 min	11.6 %
Boil	Northern Brewer	10 g	20 min	11.6 %
Aroma (end of boil)	Mandarina Bavaria	10 g	10 min	10 %
Aroma (end of boil)	Northern Brewer	15 g	5 min	11.6 %
Aroma (end of boil)	Mandarina Bavaria	10 g	5 min	10 %
Aroma (end of boil)	Northern Brewer	15 g	2 min	11.6 %
Aroma (end of boil)	Mandarina Bavaria	10 g	2 min	10 %

## Yeasts

Name	Type	Form	Amount	Laboratory
Hornindal	Ale	Slant	50 ml	Priv
Kveik Framgarden	Ale	Slant	50 ml	Priv

## Extras

Type	Name	Amount	Use for	Time
Water Agent	Kwas fosforowy	3.5 g	Mash	85 min
Water Agent	Chlorek wapnia roztwór 33%	2.3 g	Mash	85 min
Wyliczone dla 1g				
Fining	WHIRLFLOC	1.25 g	Boil	5 min
Fining	Żelatyna	3 g	Secondary	3 day(s)

## Notes

- <http://kompendiumpiwa.pl/kozlak-jesienny-holenderski-herfstbok/>  
Ekstrakt początkowy: 15,5-18°Blg, Ekstrakt końcowy: 4,0-6,0°Blg, Zawartość alkoholu: 5,0-7,5% obj, Goryczka: 20-30 IBU, Barwa: 40-90°EBC / 20-46 SRM  
- Fermentacja, start 28 st. C  
- Nagazowanie, celować w 2.3  
*Sep 18, 2020, 8:34 AM*
- Profil robiony pod tradycyjnego kozłaka  
Calcium (ppm)50-75  
Magnesium (ppm)0-30  
Alkalinity as CaCO340-80  
Sulfate (ppm)0-100  
Chloride (ppm)50-150  
Sodium (ppm)<100  
Residual Alkalinity0-60  
  
Po dodaniu 50% wody destylowanej + kwas i sole  
Calcium (ppm)66  
Magnesium (ppm)6  
Alkalinity as CaCO378  
Sulfate (ppm)76  
Chloride (ppm)78  
Sodium (ppm)26  
Residual Alkalinity28  
*Oct 18, 2020, 11:03 PM*