

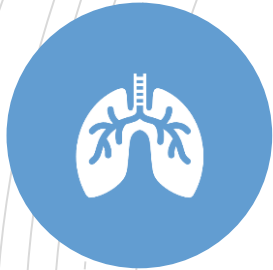


Determination of Protein Fraction Profiles of Concentrated Kefir Produced by Different Methods

Muammer Demir* Merve Al*

*Akdeniz University, Department of Food Engineering, Antalya

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Kefir and its effects on health



Antibacterial

Hypocholestromic

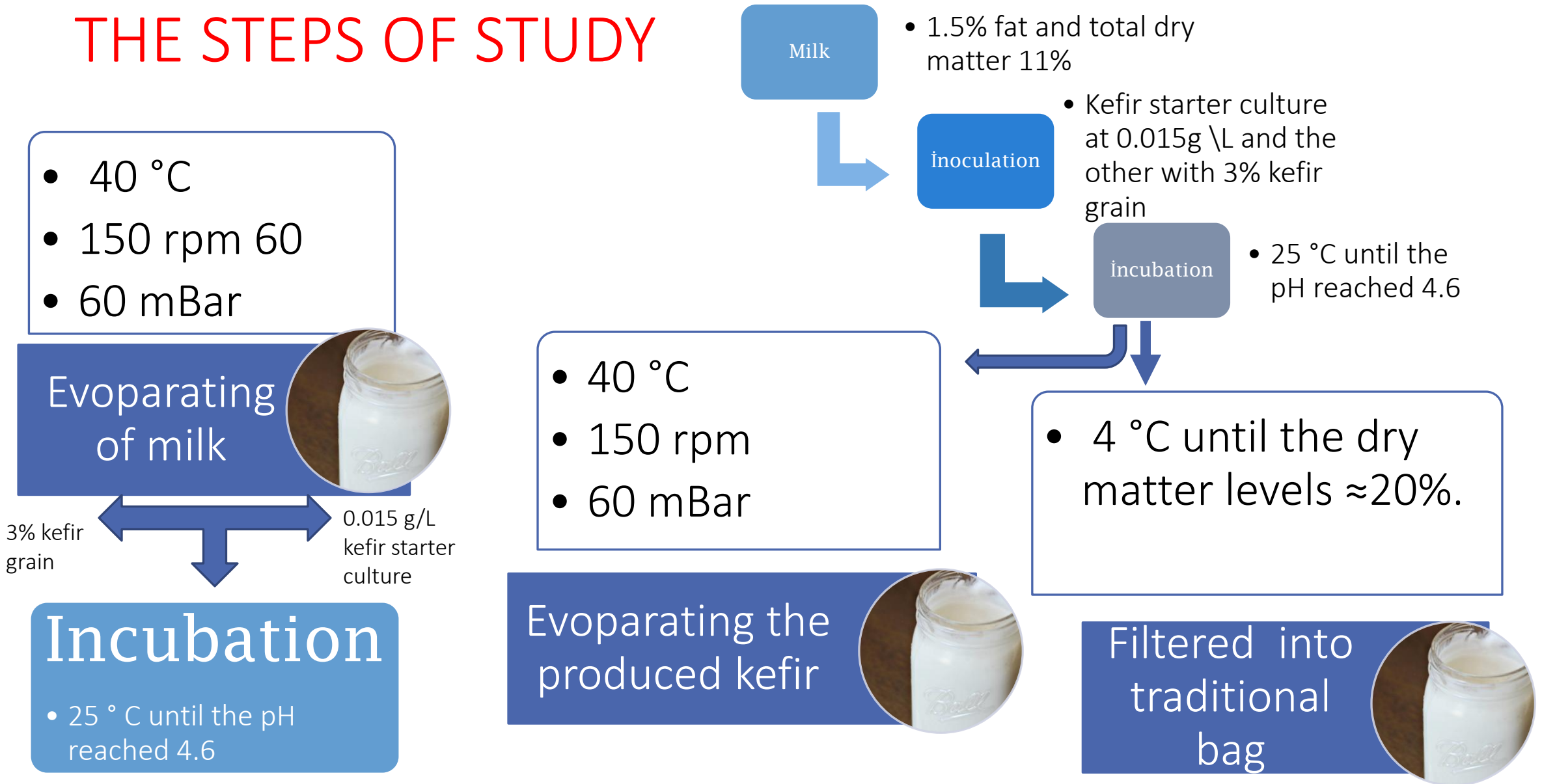
Anticarcinogenic

β -galactosidase activity



Concentrating techniques

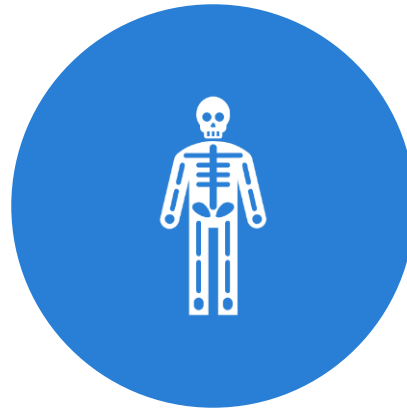
THE STEPS OF STUDY



Results and conclusion



**PHYSICOCHEMICAL
ANALYZES**



**RHEOLOGICAL
PARAMETERS**



PROTEIN FRACTIONS

SAMPLES

- ES: Concentrated kefir prepared by using evaporated milk with starter culture
- ED: Concentrated kefir prepared by using evaporated milk with kefir grain
- SEK: Concentrated kefir prepared by using evaporated kefir with starter culture
- DT: Concentrated kefir prepared by filtering the kefir produced with grain in the bag
- TS: Concentrated kefir prepared by filtering the kefir produced with starter culture in the bag
- DEK: Concentrated kefir prepared by using evaporated kefir with kefir grain

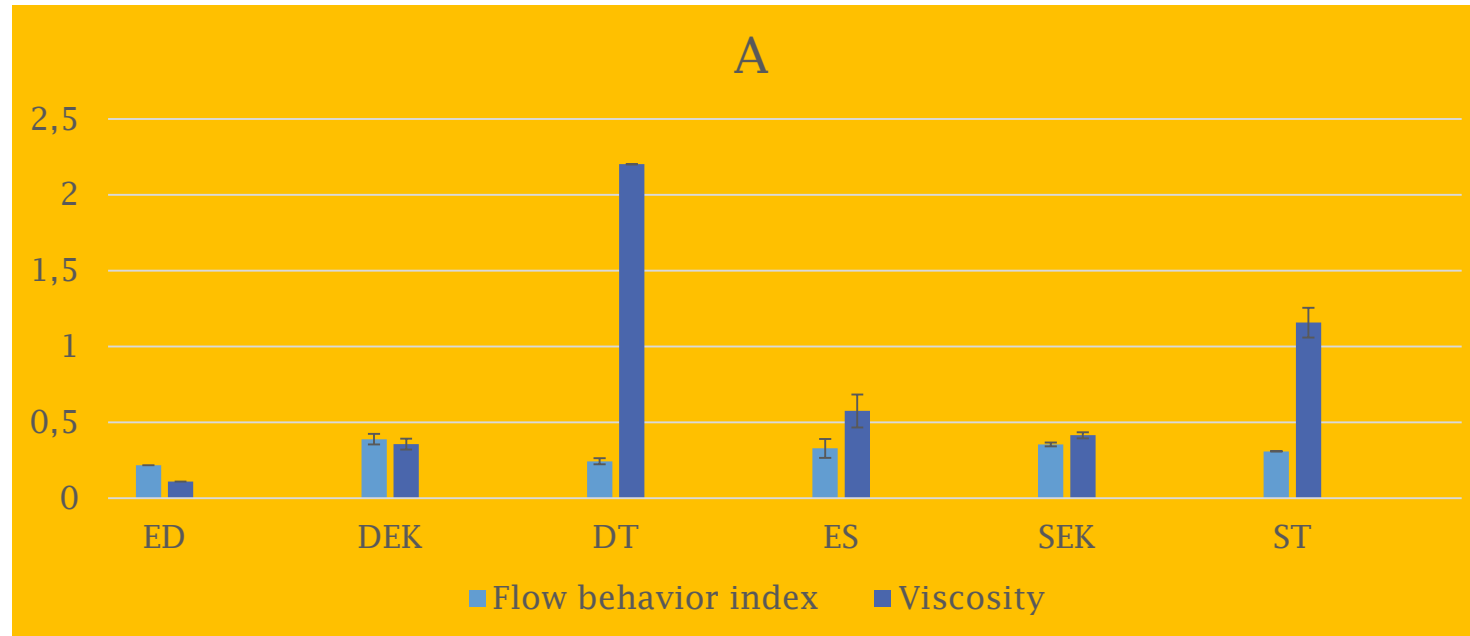
PHYSICOCHEMICAL ANALYZES

- Protein content of kefir should be at least 2.7%
- Fat content should be at most 10%.

Samples	Solid (%)	Fat (%)	Protein (%)	pH	TA (%)
ES	19.83± 0.04	2.50± 0.12	4.85±0.17	4.38±0.01	1.46 ±0.01
ED	19.82± 0.02	2.20 ± 0.15	4.64±0.13	4.55±0.00	1.16±0.02
SEK	19.63± 0.13	2.50 ± 0.01	5.62±0.05	4.40±0.00	1.43±0.00
DT	18.99± 0.06	2.00 ± 0.02	4.16±0.10	4.48±0.01	1.34±0.01
TS	19.87± 0.14	2.00 ± 0.06	4.41±0.07	4.50±0.02	1.40±0.02
DEK	19.84± 0.01	2.00 ± 0.00	5.54±0.14	4.48±0.02	1.33±0.01

RHEOLOGICAL PARAMETERS

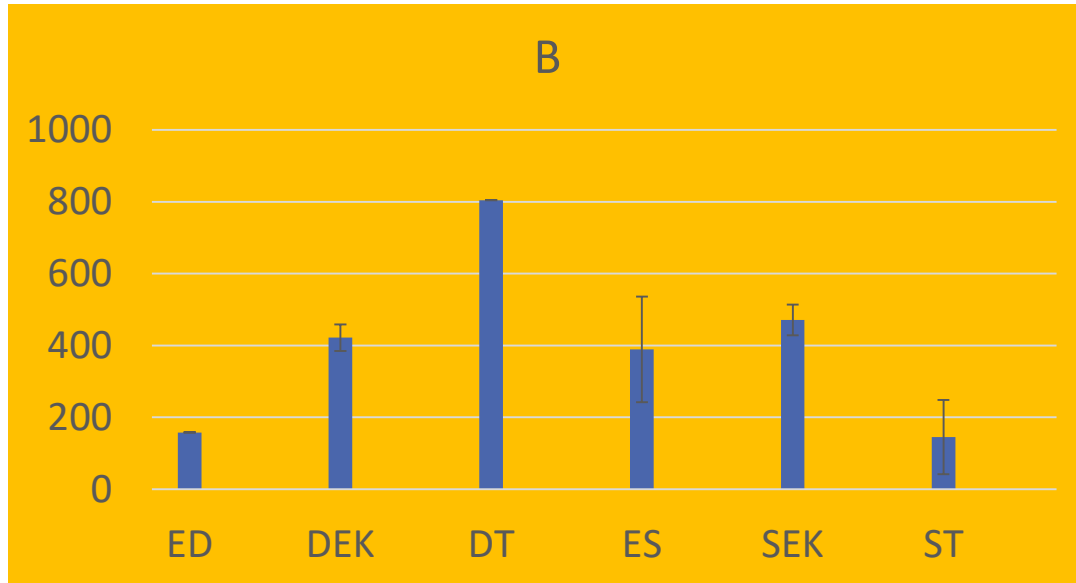
Viscosity and flow behavior index of the samples



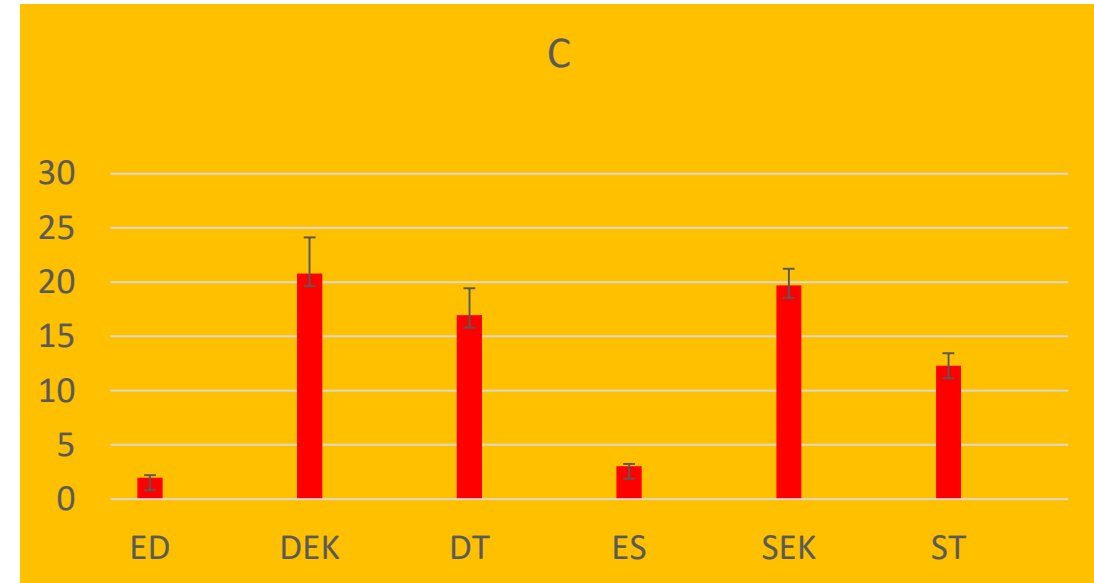
Flow behavior index values of concentrated kefir samples varied between 0.08 and 0.37 and it was concluded that the samples showed pseudoplastic flow behavior

RHEOLOGICAL PARAMETERS

Thixotropy



Consistency coefficient values

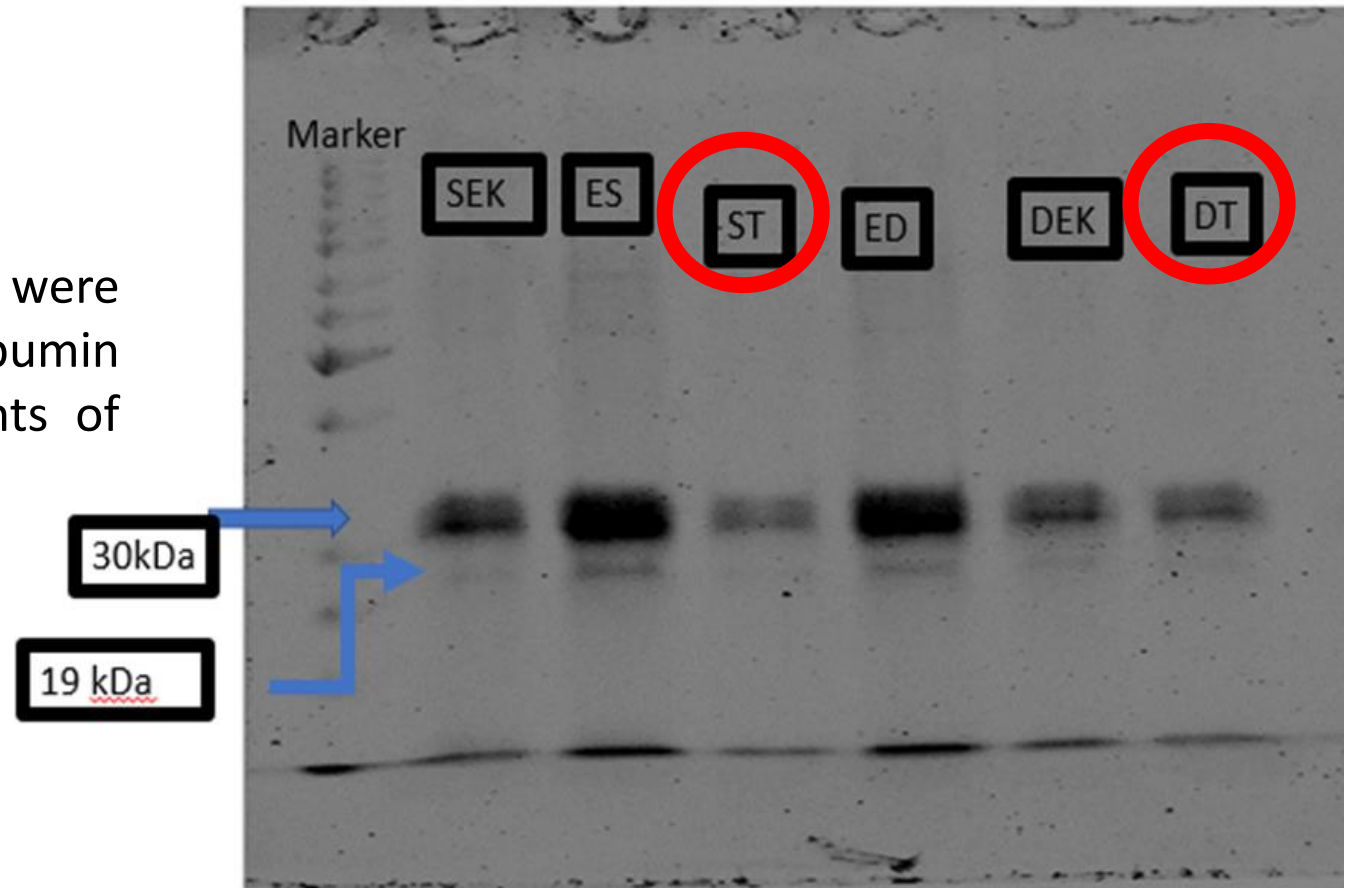


Thixotropy and consistency coefficients of the samples were determined between 157.359 Pa / s – 804.962 Pa / s and 0.2177 Pa.s - 0.3890 Pa.s respectively.

PROTEIN FRACTIONS

- ✓ The protein fractions of the concentrated kefir produced were determined using sodium dodecyl sulfate polyacrylamide (SDS-PAGE) gel electrophoresis.

- ✓ The molecular weights of casein fractions were 30 kDa. whey protein fractions α -lactoalbumin and β -lactoglobulin had molecular weights of approximately 12 kDa and 19 kDa.



CONCLUSION



- It can be suggested. whey proteins and k-casein interactions caused to increasing in viscosity of concentrated kefir samples.
- Thick protein bands around 30 kDa were observed in concentrated kefir samples obtained by evaporating kefir produced. due to the interaction between whey protein fractions and k-casein.



Thank You
== For your Attention ==