

Llisterri, J., Aguilar, L., Blecua, B., Machuca, M. J., Mota, C. de la, Ríos, A., ... Salavedra, J. (1993). *Spanish EUROM.1: Phonetic contents*. Report D 6. SAM-A/UPC/002. ESPRIT Project 6819 SAM-A, Speech Technology Assessment in Multilingual Applications.

http:
[//liceu.uab.cat/~joaquim/publicacions/Llisterri_et_al_1993_Spanish_EUROM1_Phonetic_contents.pdf](http://liceu.uab.cat/~joaquim/publicacions/Llisterri_et_al_1993_Spanish_EUROM1_Phonetic_contents.pdf)

Spanish EUROM.1 : Phonetic contents

This report defines and discusses the phonetic contents of the Spanish adaptation of EUROM.1.

1.1. Initial consonants

Block S1 includes the consonants that can appear in word-initial position in Spanish. It is worth noting that /J/ in this position is very infrequent (Alarcos, 1950 § 121) and that /L/ is pronounced as /jj/ in many Spanish speaking areas (Navarro, 1918 § 124). The semiconsonant [w] has been included to cover its realization in word-initial position after pause. The only segments of the inventory considered here that can not appear in word-initial position are /r/ and [j].

p	p ala
b	b ala
t	t ala
d	d ala
k	c ala
g	g ala
m	m ala
n	n ala*
J	ñ ala*
tS	ch ala
f	f ala*
T	z ala*
s	s ala
jj	y ala*
x	j ala
l	l ala*
L	ll ala*
rr	r ala*
w	h uala*

Block S2 includes the same consonants as S1, but followed by the vowels /i/ and /u/. Alarcos (1950 § 121) notes that /L/ never appears before the vowel /i/ in word-initial position; however, this combination has been retained since it can appear in proper nouns in the Peninsula. The combinations /jji/ and [wu] have not been included, since they are phonotactically impossible.

In Block S3 the consonantal groups that can appear in word-initial position in Spanish (Alarcos, 1950 § 122) are presented.

pr	pr ala*
tr	tr ala*
kr	kr ala*

br	brala*
dr	drala*
gr	grala*
fr	frala*
pl	plala*
kl	clala*
bl	blala*
gl	glala*
fl	flala*

1.2. Final consonants

The Block S4 covers all the consonants that can appear in final-word position in Spanish. Some aspects of its phonetic realization should be noted (Alarcos, 1950 § 121): sometimes /d/ is not pronounced or is realized as [D] or even /T/; /r/ can be realized /r/ or /rr/ according to the degree of emphasis; final /n/ can be slightly velarized in some areas of the Peninsula. Both /x/ and /k/ are very infrequent and can be deleted in this position. [j] and [w] have been included here to account for their realization as semivowels in this position.

d	lad*
T	laz*
s	las
l	lal*
r	lar
n	lan*
x	laj*
k	lac*
j	lay*
w	lau*

Medial consonants

This block has been included to account for the realization of those consonants that can only appear in word-medial position. Each one is presented in the three vocalic contexts /i/, /a/ and /u/. [j] and [w] have also been included to exemplify their realization as a semiconsonant.

B	lava labi* labu*
D	lada* ladi* ladu*
G	laga* lagui* lagu*

r	Lara lari* laru*
jj	laya* layi* layu*
j	labia labiu*
w	laua* loui*

1.3. Vowels

In Block S5 the five phonological vowels of Spanish are presented

a	tata
e	teta
i	tita
o	tota*
u	tuta*

Total inventory

The full set of vowels and consonants considered in defining the contents of Block S is presented below, together with a phonetic description.

p	voiceless bilabial plosive
b	voiced bilabial plosive
t	voiceless dental plosive
d	voiced dental plosive
k	voiceless velar plosive
g	voiced velar plosive
m	voiced bilabial nasal
n	voiced alveolar nasal
J	voiced palatal nasal
tS	voiceless palatal affricate
f	voiceless labiodental fricative
T	voiceless interdental fricative
s	voiceless alveolar fricative
jj	voiced palatal fricative
x	voiceless velar fricative
l	voiced alveolar lateral
L	voiced palatal lateral
rr	voiced alveolar trill
j	palatal glide

w	labiovelar glide
B	voiced bilabial approximant
D	voiced dental approximant
G	voiced velar approximant
r	voiced alveolar tap
a	central open vowel
e	front mid vowel
i	front close vowel
o	back mid rounded vowel
u	back close rounded vowel

Other allophones

The inventory considered before consists on the phonological inventory of Spanish plus some allophonic realizations that are dependent on the position in the word ([B], [D] , [G] ,[j], [w]). However, other allophones may appear depending on the phonetic context (i.e. preceding or following segment). The following are traditionally considered (Navarro, 1918) :

N	voiced velar nasal when preceded by a velar consonant
z	voiced alveolar fricative when followed by a voiced consonant
dZ	voiced palatal affricate in syllable initial position or preceded by /n/ or /l/
	interdental allophones of /t/, /n/ and /l/ when followed by an interdental consonant
	labiodental allophone of /m/ when followed by a labiodental consonant
	dental allophones of /n/, /s/, [z] and /l/ when followed by a dental consonant
	palatal allophone of /n/ when followed by a palatal consonant
	voiceless allophones of [B], /T/, /r/ and [G] in syllable-final position when followed by a voiceless consonant
	voiced allophone of /T/ when followed by a voiced consonant

Up to now, only [N] and [z] have been included in the transcription system that generates SAMPA notation from orthographic text.

References

ALARCOS, E. (1950) *Fonología española*. Madrid: Gredos (Biblioteca Románica Hispánica, Manuales 1), 1965 4a ed. aumentada y revisada.

NAVARRO TOMÁS, T. (1918) *Manual de pronunciación española*. Consejo Superior de Investigaciones Científicas: Madrid, Instituto Miguel de Cervantes (Publicaciones de la Revista de Filología Española, III). 21ª edición, 1982.